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Research Report 1580

# Leadership Performance Measurement in a Tactical Environment

Paul T. Twohig and Trueman R. Tremble, Jr.
U.S. Army Research Institute

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For this report, observer-controllers evaluated the leadership performance of platoon leaders and platoon sergeants during three rotations at the U.S. Army's National Training Center. Platoon leaders and platoon sergeants were evaluated in terms of leadership tasks proposed as a guide for the Army's leader development system. The overall results suggested that the proposed leadership tasks are related to unit performance and that the leadership framework provides a meaningful basis for measuring organizational leadership processes. However, improved methods are needed to yield measures that are specific to either a particular leader in a unit or to the separate components of leadership performance.

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Research Report 1580

# Leadership Performance Measurement in a Tactical Environment

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A primary mission of the Leadership and Motivation Technical Area of the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) is to enhance small unit readiness and performance by improving leadership, cohesion, and motivation. The specific research described in this report is part of a larger project on how leadership, cohesion, and motivation are developed at a unit's home station and how these factors affect unit effectiveness as indicated by performance at the Army Combat Training Centers (CTCs). The larger research project has been given the task title, "Determinants of Small Unit Performance."

This research report describes results on leadership performance and its measurement in exercises at one of the Army CTCs, the National Training Center (NTC). The leadership performance of platoon leaders and platoon sergeants was measured in terms of leadership tasks that the Center for Army Leadership, the Army proponent for leadership doctrine, proposed as a framework for guiding the Army leader development system. Leadership performance was measured in three rotations at the NTC and then related to other ratings of overall leadership effectiveness and to judgments of a platoon's effectiveness in accomplishing its missions. As part of the larger project, home station leadership is also being measured in terms of these leadership tasks to provide a wider perspective on the relationships between home station leadership and leader and unit effectiveness as indicated by performance at a CTC.

The Center for Army Leadership (CAL), U.S. Command and General Staff College, Fort Leavenworth, Kansas, sponsored and actively participated in planning the research reported here. CAL reviewed early results, participated with ARI in briefing those results to obtain continued support for data collection, and assisted in data collection. CAL reviewed the final version of this report (January 1991) and requested its publication. Research is being conducted under a Memorandum of Agreement between the U.S. Command and General Staff College and the U.S. Army Research Institute, dated 15 November 1990, subject, "Program of Research in Support of the Center for Army Leadership."

EDGAR M. JOHNSON
Technical Director

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# LEADERSHIP PERFORMANCE MEASUREMENT IN A TACTICAL ENVIRONMENT

## EXECUTIVE SUMMARY

### Requirement:

The Center for Army Leadership (CAL), the U.S. Army's pro-
ponent for leadership doctrine, has begun to focus the Army's
leader development system by identifying the leadership perfor-
mances critical to unit warfighting effectiveness. This initia-
tive requires standardized measures of leadership in terms of
potentially critical leadership performances and, in addition,
information for defining the relative importance of those per-
formances to unit effectiveness.

### Procedure:

A method for measuring the leadership performance of platoon
leaders and platoon sergeants in tactical training exercises was
developed. The method operationalized leadership performance in
terms of a test framework of leadership tasks and standards pro-
posed by CAL. This method, applied in three rotations at the
National Training Center (NTC), called for judgments by the NTC
platoon observer-controllers (OCs) of leadership task perfor-
mances during separate exercises (mission-level judgments) and
for the rotation as a whole (summary judgments). To assess the
quality of the measurement of performance, platoon and company
OCs also made judgments of the overall leadership effectiveness
of platoon leaders and platoon sergeants and of the effectiveness
of a platoon as a unit in accomplishing its mission(s).

### Findings:

(1)  The measurement method produced judgments of the sepa-
rate leadership tasks for a leader (platoon leader or platoon
sergeant) that were interdependent with platoon/unit effective-
ness, performance of different tasks by the same leader, and
performance of the same task by the two different leaders.

(2)  CAL's framework defines leadership tasks that appear to
be a meaningful basis for measuring leadership processes in a
unit and the relationship of these processes to unit performance
in realistic tactical simulations. Aggregated measures of these
tasks for a leader are also meaningfully associated with the
overall leadership effectiveness of the leader.

(3)  The measurement method did not distinguish differences between the tasks and, therefore, differences in their relative importance to leadership or unit effectiveness.  For OCS and unit members, there is nevertheless some consistency in their views of the leadership tasks that are most important for unit effectiveness in combat settings, especially the tasks important for platoon leaders.

(4)  The present leadership performance measurement method needs to be improved to yield measures of leadership that are more independent of the organizational leadership processes in the performance setting and that are more independent across the separate components of leadership.  This may require a more elaborate framework of leadership that specifies the performance attributes that distinctively differentiate both the separate leadership components and the leadership behaviors expected of different types of leaders.


Utilization of Findings:

These data provide general support for organizing leader development programs around the leadership components in CAL's framework of leadership tasks.  They also identify needs for refinement that will make the framework and measures of the performances in it more useful for standardized assessment of individual leaders.

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# LEADERSHIP PERFORMANCE MEASUREMENT IN A TACTICAL ENVIRONMENT

## INTRODUCTION

The U. S. Army Training and Doctrine Command (TRADOC) formed a special study group in 1987 to assess the current status of leader development activities in the Army and to identify immediate and long-term actions needed to direct the leader development system over the next 15 years. This 1987 Leader Development Study (LDS) called for establishment of a common doctrine of leadership focusing on warfighting and specifying the leadership performances required for warfighting effectiveness. Once established, these leadership standards would be used to judge the success of and to indicate improvements in components of the leader development system--leadership selection, training, assessment, developmental experiences during unit assignments, etc. The standards could also be used to identify needed areas of improvement for individual leaders.

The C ter for Army Leadership (CAL), the U. S. Army proponent fc.. leadership doctrino, began a program to define the leadership standards recommended by the LDS. The overall goal was to establish a data base for identifying and validating the leadership tasks and performance standards that are required for warfighting effectiveness and that are generally applicable to the Army's leaders. Toward this goal, CAL proposed for testing a framework of leadership tasks and standards. Of the 19 originally proposed tasks, nine were based on behavioral components that earlier efforts had treated as leadership competencies (Clement & Ayres, 1976; Headquarters, U. S. Army Training and Doctrine Command, 1983)[1]: planning, communication, supervision, soldier/team development, decision making, teaching/counseling, professional ethics, technical/tactical proficiency, and management technology. These nine tasks were augmented by tasks describing leadership attributes that are reflected in (or necessary to implement) current operational doctrine: initiative, flexibility, motivation of others, trust in subordinates, boldness, climate setting, direction, innovation, purpose, and risk taking. CAL further specified performance standards for each task that, as presented, tended to consist of subtasks of the broader tasks. CAL's framework also included types of performances, referred to as performance indicators, that could be assessed to determine whether standards had been met. Figure 1 presents the task of planning to exemplify CAL's proposed framework. CAL's proposal reflected

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[1]The nine competencies now also appear in the most recent version of the U. S. Army Field Manual 22-100, Military Leadership (Headquarters, Department of the Army, 1989).

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Figure 1
Example of CAL's Leadership Tasks, Standards, and Performance
Indicators

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TASK: Plan Effectively

STANDARD 1. Organize.

    Performance Indicators:
    -Leader effectively sequences and times events using
     backward planning.
    -Leader establishes priorities for accomplishing tasks.
    -Leader identifies and allocates resources to accomplish the
     mission.

STANDARD 2. Establish courses of action to meet goals and
            objectives.

    Performance Indicators:
    -Leader is able to describe the actions necessary to
     accomplish specific courses of action.
    -Leader considers METT-T.
    -Leader considers resources available.

STANDARD 3. Plan beyond initial operations.

    Performance Indicators:
    -Contingency plans are developed.
    -Resources are allocated with continuous operations in mind.
    -Flexibility to change quickly is built into the plan.
    -Leader's plan is consistent with commander's intent.

STANDARD 4. Establish a unit of purpose for the unit.

    Performance Indicators:
    -Leader establishes priorities for accomplishing mission.
    -Subordinates at least two echelons below understand the
     overall mission.
    -Leader's purpose fits within superior's purpose.
    -Leader establishes tough achievable goals and objectives.

STANDARD 5. Establish goals and objectives.

    Performance Indicators:
    -Subordinates understand the unit goals and objectives.
    -Leader's goals and objectives are within the intent of
     higher goals and objectives.
    -Leader determines task milestones.
    -Subordinates understand sequencing and timing of tasks.

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the goal of a leadership framework that was explicit enough to provide an Army-wide basis for leader development and assessment.

## LEADERSHIP PERFORMANCE AND MEASUREMENT
## IN TACTICAL EXERCISES

One thrust of research by the U. S. Army Research Institute (ARI) has had the objective of developing measures of leadership performance. To support CAL's program, this research adopted CAL's doctrinal concepts as the basis for measurement of leadership in tactical training exercises at the National Training Center (NTC). Prior research indicated the potential for measurement in such realistic simulations of combat (Pence & Endicott, 1985).

### The NTC Training Environment

As the original Combat Training Center (CTC) developed by the Army, the NTC is widely regarded as providing unit training through highly realistic simulations of combat. For training sessions (or rotations) at the NTC, brigades composed of two battalion task forces deploy to the NTC and engage in successive combat operations (missions) for a continuous period of approximately two weeks. During this period, there are two general types of missions: force-on-force (FOF) and live fire (LF). The FOF missions are fought against a resident opposition force (OPFOR) that is organized and fights in accordance with Warsaw Pact doctrine. The Multiple Integrated Laser Engagement System (MILES)--a technology in which laser bursts are fired with blank rounds and detected by receptors on targets--is used on individual soldiers and direct fire weapons systems to simulate and record firing data and kills. Field artillery, air, and chemical attacks are also played but somewhat more notionally through the actions of the observers/controllers (OCs) assigned to elements of the task forces. In LF missions, live ammunition is used, and the OPFOR is represented by target-silhouettes which, in some areas of the training range, "advance" toward the U. S. units undergoing training.

Critical to the training exercises are the OCs permanently assigned to the NTC. As a rule, one OC is assigned to each platoon and larger element for the duration of a rotation. The OCs perform many duties to meet the goal of realistic, effective, and safe unit training. One major duty involves observation of the assigned unit and its members. The OCs' observations are used to insure the accuracy of records on unit performance. Their observations also provide the basis for feedback to the unit both in discussions conducted after each mission and in reviews of the rotation prepared for the unit's use at its home station.

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The length, realism, and size of exercises make the NTC an excellent training setting. They also make the NTC a potentially valuable setting for data collection on leadership performance and other phenomena in combat settings. This potential is recognized in that while training is the primary NTC objective, a secondary objective is use of the experiences by particular units to develop lessons learned for the Army at large. As has been indicated elsewhere (U. S. General Accounting Office, 1986), application of measures based on doctrinal standards would help to realize the research potential of the NTC.

## Early Leadership Research at the NTC

ARI research on leadership and its measurement at the NTC began with interviews of NTC veterans and observations of NTC training to determine the possibilities of and requirements for data collection (Pence & Endicott, 1985). These efforts concluded that observations made by OCs have great potential for use as data for research on leadership. It was also concluded that given the other requirements on OCs and the demands for meeting these requirements, a data collection design should create neither any interference with the OCs' training role nor any increase in existing time demands on the OCs. Two types of data collection were suggested as workable. Workloads and the field environment would possibly permit an OC to record small amounts of data during missions. These data could then be augmented by more extensive data obtained through surveys completed at the end of the entire rotation.

The potential for leadership data collection was examined further in an NTC rotation that focused on platoon-level leadership and the relationship between the platoon leader (PL) and platoon sergeant (PSG) (Rachford, Twohig, & Zimmerman, 1986). In this rotation, 10 broad leadership dimensions defined the framework for measurement of the performances of PLs and PSGs. Of the 10 dimensions, nine were included in CAL's more recent task list: planning, communication, supervision, soldier/team development, decision making, teaching/counseling, technical/ tactical proficiency, professional ethics, and initiative. The tenth dimension was subordinate leader development. Subject-Matter-Experts (SMEs), trained in the data collection methods, were the primary data collectors. Each SME was attached to a platoon OC for several FOF missions to collect four types of data on the PL and PSG. Two types of data were collected for each mission: (1) the frequency that the PL and PSG performed 90 tasks representing the 10 leadership dimensions and (2) the quality of the PL-PSG interactions. After having observed a PL and PSG for at least three missions, an SME made two additional ratings: (1) the overall performance effectiveness of the PL and PSG on each dimension and (2) the quality of the working relationship between the PL and PSG. At the end of the rotation,

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the OC for a platoon also made summary judgments of the overall leadership effectiveness of the PL and PSG and of the effectiveness of the platoon with respect to mission accomplishment.

The 1986 rotation yielded results pertinent to leadership effectiveness and the PL-PSG relationship, some of which are discussed later. The number of leaders who SMEs could observe and judge, however, was much smaller than had been expected. This reduced quantity of data gave support to the earlier conclusion that observation by OCs is possibly the most efficient means for collecting leadership data in NTC exercises.

## Current Leadership Research at the NTC

ARI's more recent research at the NTC has had two principal objectives. The more immediate objective was to assess measures of leadership performance developed to represent CAL's leadership framework. The second, longer term objective was to initiate a data base on leadership and unit performance for further specification of the leadership components for inclusion in an Army-wide framework of leadership.

To build on the earlier efforts, this research has focused on platoon-level leadership. The measurement method was also based on the earlier recommendation (Pence & Endicott, 1985) for data collection by the NTC OCs. More specifically, the method called for collection of two types of performance judgments by OCs. One consisted of judgments of the performance of selected leadership tasks during the separate missions of an NTC rotation. These were made during or as soon as possible after completion of a mission. The second consisted of judgments, made at the end of rotation, of performance during the rotation as a whole. Overlap between the performances judged per mission and for the rotation as whole allowed assessment of measurement reliability. Other data were also collected in order to assess the measures of leadership performance.

Adoption of CAL's leadership framework has been useful for measurement assessment. That is, this framework is essentially a doctrinally based model of the leadership performances important to unit effectiveness. As such, it sets forth at least two basic sets of assumptions for assessment. First, it suggests conditions necessary for potential measurement settings--in this case, exercises at the NTC. In particular, CAL's framework suggests that exercises appropriate for leadership measurement should simulate (or otherwise unfold) events in which leadership is an important factor. Even more, the exercises should elicit performances that represent CAL's tasks. Second, CAL's framework implies that effective leadership involves performance of the identified tasks and, moreover, that the quality of task performance impacts positively on unit effectiveness. Results

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pertinent to the latter expectations are thus indicative of the validity of the leadership performance measures.

Data have been collected during three NTC rotations. The core measure of leadership performance was the same in all three rotations. The methods were modified after the first rotation to increase the data available for measurement assessment.

## REPORT OBJECTIVES

This report describes the method developed for measuring leadership performance and results from the three NTC rotations in which the method was used. The principal objectives are to: (1) assess the measures developed under CAL's framework and the general potential for measurement of leader performance in NTC exercises and (2) describe leadership performance during the rotations and its relationship with unit effectiveness.

## RESEARCH METHODS

In all three rotations, platoon-level OCs applied the same method to (1) judge the leadership performance of platoon leaders (PLs) and platoon sergeants (PSGs) during separate missions and (2) make summary judgments of their performance for the rotation as a whole. Platoon OCs also made judgments for assessing measurement. In all rotations, they judged the overall leadership effectiveness of the PL and PSG per mission and platoon (unit) effectiveness both per mission and for the overall rotation. In the second and third rotations, the data collected on measurement reliability and validity were expanded. In those rotations, platoon OCs judged leadership effectiveness for the overall rotation, and company-level OCs judged the effectiveness of the platoons and PLs in their companies.[2]

## LEADERSHIP PERFORMANCE MEASURE

The measurement method was designed to balance two somewhat competing priorities. One was a method complete enough to measure CAL's overall framework and to standardize the processes of performance observation and assessment. The second was to minimize the impact of the mechanics of measurement on the other duties of or time spent by OCs. The resulting methodological approach had two basic components: (1) observation guides or

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[2] Company OC judgments were collected to assess reliability. It is recognized that their judgments were not ideal for this purpose. Platoon and company OCs have somewhat different observational bases which would reduce agreement. On the other hand, job duties require them to trade appraisals (for example, in preparation for after-action-reviews) which would have reduced the independence of their judgments.

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instruments which OCs used to make scaled judgments of leadership and (2) training in use of the guides.

## Development of Observation Instruments

**Leadership tasks selected for measurement.**--Design of the observation instruments started with selection of the leadership tasks for measurement. CAL's framework, discussions with NTC OCs, and consideration of the earlier NTC leadership research indicated the following, as summarized in historical order in Table 1:

(1) The nine tasks (see first column), originally identified as leadership competencies (Headquarters, U. S. Training and Doctrine Command, 1983), were derived from an extensive literature review (Clement & Ayres, 1976). As noted earlier, these nine have since been adopted for the updated version of the Army's core leadership manual (FM 22-100).

(2) ARI's past NTC leadership research (second column) had covered the original nine performance domains, with the exception of management technology. That research included two additional components--initiative and subordinate leader development--that were more directly identifiable in CAL's tasks representing leadership attributes.

(3) The version of CAL's framework at the initiation of this effort (third column) included some tasks that, even though conceptually distinguishable from each other, seemed to be highly interrelated (column CAL '87). The tasks also varied in the scope and likely availability of observational evidence for judgments about whether and how well the tasks had been performed. These qualities were later used to select and reduce the set of leadership components for measurement.

(4) Discussions with NTC OCs (fourth column) revealed that at least five of CAL's leadership tasks were believed to be consistently observable or important in NTC exercises: planning, communication, supervision, initiative, and technical/tactical proficiency.

Given these considerations, it was decided that leadership would be measured in terms of 11 tasks in CAL's framework (see column labeled "NTC '88 - SUM"). Nine of these tasks were measured on all three rotations, indicated by "Xs" in the calls of column SUM. These included the five identified in discussions with the NTC OCs: planning, communication, supervision, initiative, and technical/tactical proficiency. Those five tasks were augmented by another three for comparability with the earlier ARI research: soldier/team development, decision making, and teaching/counseling.

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Table 1
<u>Leadership Components Identified in U. S. Army Doctrinal and Research Efforts</u>

| Leadership Component | <u>Doctrinal and Research Efforts</u> | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | PAM 525-28 | NTC '86 | CAL '87 | OC '87 | NTC '88 Mission | SUM |
| Planning .............. | X | X | X | X | X | X |
| Communication ......... | X | X | X | X | X | X |
| Supervision ........... | X | X | X | X | X | X |
| Soldier/Team Development ........ | X | X | X | | X | X |
| Decision Making ....... | X | X | X | | | X |
| Teaching/Counseling ... | X | X | X | | | X |
| Technical/Tactical .... | X | X | X | X | | X |
| Professional Ethics ... | X | X | X | | | |
| Management Technology . | X | | X | | | |
| Initiative ............ | | X | X | X | X | X |
| Flexibility ........... | | | X | | | X |
| Motivation of Others .. | | | X | | | Y |
| Trust in Subordinates . | | | X | | | Y |
| Boldness .............. | | | X | | | Z |
| Innovation ............ | | | X | | | Z |
| Climate ............... | | | X | | | |
| Direction ............. | | | X | | | |
| Purpose ............... | | | X | | | |
| Risk Taking ........... | | | X | | | |
| Subordinate Leader Development ........ | | X | | | | |

<u>Note</u>. Descriptions of column headings are as follows: (1) <u>PAM 525-28</u>--TRADOC Pamphlet, 1983; (2) <u>NTC '86</u>--Components identified for earlier ARI research (Rachford et al., 1986); (3) <u>CAL '87</u>--Tasks in CAL's initial leader performance framework; (4) <u>OC '87</u>--Components identified in interviews with OCs; (5) <u>NTC '88</u>--Tasks judged per mission (Mission) and at end of rotation (SUM) in this effort. Column entries are: <u>X</u> = rated in all 3 rotations; <u>Y</u> = rated in first rotation only; <u>Z</u> = rated in second and third rotations only.

The other task measured on all three rotations was flexibility. The latter task and the three tasks measured on just one or two of the rotations (motivation of others, trust in subordinates, and boldness) had been chosen by CAL to represent leadership attributes necessary for battlefield success. These latter four tasks seemed to be distinct from the existing competency-based tasks. They were varied by rotation to minimize the number of tasks judged during a single rotation and yet to obtain some information on most of the tasks proposed for the leadership framework.

To distribute measurement demands further, it was decided to measure leadership performance during the separate missions in terms of five of the selected tasks (see column labeled "NTC '88 - Mission"). Four of the five tasks--planning, communication, supervision, and initiative--had been identified by OCs as consistently important and/or observable at the platoon level. The fifth task judged per mission, soldier/team development, was selected to insure coverage of the human relations aspect of leadership during missions.[3] At the end of the rotation, performance of these five tasks and of the other tasks selected was measured for the rotation as a whole (column, NTC '88 - SUM).

Performance measurement scale.--As presented earlier, CAL's goal has been a leadership framework that provides a standard for assessing leader development. CAL leadership experts were presented with several possible scales for rating leader performance. Congruent with the above goal, they chose a four category scale of the "extent to which performance had met standard." The four categories or levels of performance relative to standard were: "far below" standard, "below" standard, "meets standard", and "exceeds" standard.

Final instrument format.--The leadership tasks and the scale for judging leadership performance during separate NTC missions were printed on a three-by-five note card depicted in Figure 2. As Figure 2 shows, the card called for separate judgments of the performance of the PL and PSG in a platoon on the five leadership tasks identified earlier. For each task, summary descriptions of more explicit performances or conditions were printed as reminders of the task definitions. The performance descriptions were drawn from the materials prepared to train OCs in use of the measurement method.

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[3] Consideration of the materials to be used by OCs to record judgments led to the decision that five tasks would be judged per mission. While OCs had nominated technical/tactical proficiency and while this leadership component is obviously important, CAL's and ARI's research programs were more directly concerned with the non-technical aspects of a leadership performance.

**Figure 2**
**Measure of Leadership Performance**

OC Team_____  TF/CO/Platoon_____  Date_____  Mission_____

### Performance vs Standard

| | Far Below | Somewhat Below | Meets Standard | Exceeds |
|---|---|---|---|---|
| **PLANNING**<br>Plan quality, timeliness | PL | | | |
| | PSG | | | |
| **COMMUNICATION**<br>With subordinates, superiors | PL | | | |
| | PSG | | | |
| **SUPERVISION**<br>Specify tasks, check/correct | PL | | | |
| | PSG | | | |
| **INITIATIVE**<br>Exploit opportunities | PL | | | |
| | PSG | | | |
| **SOLDIER/TEAM DEVELOPMENT**<br>Teamwork/care for troops | PL | | | |
| | PSG | | | |

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The end-of-rotation judgments were obtained through a questionnaire which replicated the task description format and the judgment scale used per mission. However, the questionnaire presented 11 tasks for judgment. Moreover, a summary or overall judgment of performance was sought for each task through instructions indicating that these judgments were to be "based on the rotation as a whole" for the observed PL and PSG. This questionnaire appears in Appendix A.

## Observer Training

As noted earlier, CAL's framework described leadership performance in increasingly more objective or explicit terms as it shifted from description of a task to specification of performances indicating "performance according to standard." The observer training built on this framework and sought to achieve consistency in performance judgments by focusing attention on the types of behavioral or objective indicators identified by CAL. The training and training materials were developed around the five leadership tasks judged per mission.

For each of the five tasks, CAL's original standards and indicators of task performance were first synthesized into descriptions of performances that represent "meets standard" for the task. For each task, behavioral anchors were then prepared for the other levels of performance--far below, below, and exceeds standards. These anchors were also drawn from CAL's standards and indicators but written to describe relative, qualitative differences likely associated with performance exceeding standard or falling at some level below standard. To focus judgment further, a more extensive listing of performances indicators for each task was generated; however, these indicators were not differentiated by level of performance. These descriptions were assembled into materials for reading prior to the start of a rotation. Appendix B contains these materials.

For the first and second rotations, classroom training was held in a one-hour session for each OC group, a day or two before a rotation.[4] The third rotation followed closely enough behind the second rotation that training sessions were not conducted. Prior to a session, OCs were supplied read-ahead copies of the mission-level data collection cards and copies of the materials for guiding observation and judgment of leadership task performance during the missions. The training session, led by an ARI researcher, concentrated on reinforcing the read-ahead materials by: (1) clarifying the goal that leadership performance should be judged according to the standards provided; (2) discussing the standards provided; (3) emphasizing use of

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[4] A one-hour session was planned to fit with the time available for training.

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actual performance observations as the basis for judgments; and (4) reviewing expected data collection procedures with respect to the leaders targeted for observation (PLs and PSGs), independence of judgments of PL and PSG leadership, and the timing and mechanics of recording judgments on the cards.

## APPLICATION OF THE MEASUREMENT METHOD

### Sample

The three NTC rotations with data collection occurred during fiscal year 1988. The brigades undergoing training were organized into two battalion task forces (TFs), with each TF composed of organic companies and of companies cross-attached from other battalions, usually from the same brigade. All TFs had either armor or heavy infantry line companies. In each rotation, one TF typically fought three battalion-level force-on-force (FOF) missions followed by three battalion-level live fire (LF) missions. The order of the FOF and LF sets was reversed for the other TF. In the last phase of the rotation, both TFs undertook another three FOF missions within the context of brigade-level operations. The types of missions included defense in sector, movement to contact, hasty attack, and deliberate attack. Missions began both in daylight and darkness.

For each mission, data were collected on the mechanized infantry, armor, scout, mortar, engineer, and field artillery platoons (or comparable levels) in each TF. Given the TF organizations, the maximum potential sample was 33 platoons per mission, per rotation.

### Data Collectors

The OCs assigned to the sampled platoons were the principal data collectors. In accordance with routine NTC procedures, one OC was assigned to a platoon during its six FOF missions. A different OC observed the platoon during its three LF missions. Therefore, all judgments of FOF performance for a platoon were made by a single OC; likewise, all judgments for LF performance were made by a single but different OC. In the second and third rotations, company-level OCs performed analogously to collect data to assess measurement reliability.

To collect supplementary data on leader performance and its measurement, a subject-matter-expert (SME) accompanied the OCs (LF and FOF) for each of 10 platoons during the first rotation. Of the 10 SMEs, three were ARI researchers; the remainder consisted of five commissioned and two noncommissioned officers from various training centers and agencies with special interest in leadership. The SMEs were trained in a four-hour block that included the training given OCs and additional background information to guide collection of the supplemental data.

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Instruments

OC mission-level cards.--OCs used three three-by-five note cards to collect data on each separate mission. Figure 2, presented earlier, replicates the card that platoon OCs used to record judgments of leadership performance. The card as it appears in Figure 2 was the same for all three rotations.[5]

A second card was used in all rotations to collect data for validating the mission-level measures of leadership performance. As shown in Figure 3, this card contained items that elicited platoon OCs' judgments of the overall effectiveness of (1) PLs and PSGs as leaders and (2) the platoon as a unit in accomplishing its mission. Leadership and platoon/unit effectiveness were judged on a four-category scale ranging from "poor" to "excellent." The items on PL leadership effectiveness and platoon/unit effectiveness were similarly formatted on a card to obtain company OCs' judgments per mission. As Figure 3 notes, the other items on this card differed somewhat for the first and two later rotations. In all rotations, judgments were obtained about the importance of leadership to mission accomplishment. In the first rotation, importance of "platoon-level" leadership was rated; importance ratings were made separately for the PL and PSG in the two later rotations. In the first rotation only, this card produced judgments about sleep for use other research being supported by the NTC.

A third card was used in the three rotations (see Appendix C). In the first rotation, this card elicited judgments of the quality of five components of the working relationship displayed by a PL and his PSG during a mission. For the second and third rotations, OCs used this card to summarize the evidence they had used for judging performance of the leadership tasks.

OC end-of-rotation questionnaire.--The questionnaires administered to platoon OCs at the end of all three rotations (see Appendix A) contained the items that, as described earlier, produced summary judgments of a PL's and PSG's performance of 11 leadership tasks. Items were also included for judgments of overall unit effectiveness in all rotations. In the second and third rotations, the questionnaire included items for judgments of overall leadership effectiveness of the PL and PSG. All

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[5] For the second and third rotations, space was identified on the back of this card for OCs to make notes as appropriate of any condition that had limited their ability to make sound judgments. These notes provided information generally comparable to that obtained by the SMEs in the first rotation.

Figure 3
**Measures of Leadership and Platoon/Unit Performance**

OC Team_____ TF/CO/Platoon_____ Date_____ Mission_____

Overall Effectiveness of:

| | Poor | Only Fair | Good | Excellent |
|---|---|---|---|---|
| PL as a leader | | | | |
| PSG as a leader | | | | |
| Platoon as a unit in accomplishing mission | | | | |

Importance to Mission Accomplishment of:

| | Very Unimpt. | Not Impt. | Impt. | Very Impt. |
|---|---|---|---|---|
| Platoon-level Leadership | | | | |
| Leaders' Sleep Loss | | | | |

Note. In the second and third rotations, platoon leaders and platoon sergeants were rated separately for their "importance to mission accomplishment." The scale appearing here was used for making these importance ratings.

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overall effectiveness judgments were made with the same scale used for mission-level judgments (see Figure 3). At the end of the two later rotations, company OCs also used these items and scales to judge, for the overall rotation, PL leadership effectiveness.

For the second and third rotations, the platoon OC questionnaire contained a second listing of the 11 leadership tasks and instructions for identifying the four tasks believed to be relatively most important for mission accomplishment. Each OC nominated the most important leadership tasks separately for PLs and for PSGs.

SME guide.--For the first rotation, an observation guide was prepared that contained questions and statements for structuring observations and notes by SMEs on two general issues. One issue concerned the performances observed during a mission or other evidence that had been useful to the SME for judging performance of the 11 leadership tasks by the PL and PSG. The second issue concerned conditions in the unfolding of a mission that placed constraints on the leadership performance of a PL or PSG or that influenced (either positively or negatively) observation and judgment of such performance. Appendix D outlines the content of the SME guide.

## Procedures

Data collection during missions.--The platoon- and company-level OCs executed their routine duties for the missions in the rotation. Per the OC training, the OCs recorded their mission specific judgments on the note cards as soon after the end of a mission as duty requirements allowed.

After-Action discussions.--At the ends of the first two rotations, a one-hour discussion was held with the teams of OCs who had judged leadership performance during missions. In each session, OCs first completed the end-of-rotation questionnaire. Afterward, an ARI researcher posed questions to direct group discussion on: (1) ways to improve judgments of leadership performance, (2) opportunities during the missions for observing and judging the leadership of both the PL and PSG, (3) overall confidence in judgments about level of leadership performance relative to standard, and (4) adequacy of the five leadership tasks as a measure or indicator of leadership performance during a mission. The discussions were directed to obtain as many different views from OCs on these issues as practical, as opposed to consensus. Other researchers noted the OCs' comments. Discussion sessions were not held for the third rotation, and end-of-rotation questionnaires were distributed to the teams of OCs prior to the rotation for self-administration afterward.

After the first rotation, the SMEs participated in a five-hour group discussion of similar issues. These discussions were structured so that the SMEs relayed their experiences and opinions about the 11 leadership tasks with respect to: (1) evidence during a rotation that is obtainable and useful for judging task performance and (2) conditions in a rotation that help or hinder acquisition of evidence about task performance.

## General Analysis Procedures

For judgments of both mission-level and overall rotation performances, the applicable judgment categories were first scaled with values ranging from 1 to 4, with the values assigned so that higher values represent more favorable judgments of performance of a variable. For example, judgments of performance of the leadership tasks were scaled as follows: 1 = "far below standard"; 2 = "below standard"; 3 = "meets standard"; 4 = "exceeds standard."

Many analyses of the mission-level data were conducted on averages of the judgments made for the separate missions, referred to as a mission average (MA). To retain as much data as possible, decision rules were established for retaining data and calculating MAs for platoons with missing data on some missions. Data were retained and averaged if: (1) for FOF data, there were data for at least four of the six missions for a variable such that two of the missions occurred within the first three FOF missions and the other two occurred within the last three FOF missions; (2) for LF missions, there were data for any two of the three LF missions. These rules for data retention were applied separately for each variable for which an OC made a judgment (e.g., for each of the five leader performance components).

Of the MA measures, four sets are key to this report. One was the leadership performance measure based on platoon OCs' judgments of the five leadership tasks measured per mission. This measure, labelled MA-Perf, was computed for each PL (PL MA-PERF) and PSG (PSG MA-PERF) by first averaging judgments of performance of each task across missions and then averaging across the averages obtained for the tasks. The other key MA measures were the judgments of overall effectiveness made per mission for assessing the validity of the performance measures: PL as a leader (platoon and company OCs), PSG as a leader (platoon OCs), and platoon as a unit in accomplishing its mission (platoon OCs). These judgments were averaged across missions to form mission-level measures of PL effectiveness (PL MA-EFF), PSG effectiveness (PSG MA-EFF), and platoon unit effectiveness (PLT MA-EFF).

The platoon OCs' end-of-rotation performance judgments were also averaged to form an overall or summary measure of leadership performance for each PL and PSG. These measures, referred to as

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PL and PSG SUM-PERF, were formed by averaging judgments of the nine leadership tasks common to the three rotations. The end-of-rotation measures of effectiveness for the overall rotation did not require averaging: effectiveness of a platoon in accomplishing its missions (PLT SUM-EFF) and the second and third rotation measures of overall platoon leader and platoon sergeant effectiveness (PL SUM-EFF, PSG SUM-EFF).

## RESULTS AND DISCUSSION

This report presents quantitative results on OCs' judgments of performance in FOF missions. Several considerations drove the decision to concentrate on FOF data. First, the LF and FOF missions set up different performance contexts, and separate analysis prevents contextual differences from masking results. Second, the larger number of FOF than LF missions (six versus three) provides a somewhat more reliable basis for performance measurement and identification of relationships. Finally, separate analysis allows for more direct comparison of present results with results of earlier ARI NTC leadership research (Rachford et al.,1986) which involved only FOF missions.

### LEADERSHIP PERFORMANCE MEASUREMENT

#### Potential for Measurement

As used here, measurement potential concerns whether a measurement method yields the types of data of interest when the method is applied in a particular performance setting, in this case the NTC. Platoon OC judgments produced data on three indicators of potential: completeness of data returns, perceived importance of leadership for platoon mission accomplishment, and sensitivity of the leadership measures to the potential range of leadership performance.

Completeness of data.--A basic indicator of the potential for measurement is the extent to which data expected to be available for collection are actually collected. The more complete the data, the stronger the indication that the variable or its measure has some application in the measurement setting. For this effort, this indicator was examined for mission-level variables in terms of the proportion of missions in which OCs made judgments about the five leadership tasks.

For the FOF missions, there were about 540 opportunities for missions-level judgments of each task (3 rotations by 30 platoon OCs by 6 FOF missions). For the five leadership tasks, the average percents of judgments for a task were 92% for PLs and 87% for PSGs. These results indicate that the OCs were able to make judgments of leadership performance. The somewhat lower proportion of judgments for PSGs could indicate the difficulty of observing multiple leaders. This relatively lower proportion

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could also indicate the distribution of leadership tasks during missions. That is, past research (Twohig & Tremble, 1987b) found that soldiers believed that in a combat-type setting, PLs were more likely to perform behaviors representing CAL's leadership tasks than were PSGs.

Leadership importance.--Since the NTC simulates battalion- and brigade-level combat operations, one issue for measurement potential is whether the NTC performance context exercises platoon-level leadership performance so that it is an appropriate target for measurement. To examine this, OCs used the four-point scales described earlier (see Figure 3) to judge for each mission the importance of leadership for platoon mission accomplishment.

For the first rotation, the average mission-average (MA) rating of importance of platoon leadership was 3.1. For the last two rotations with separate importance ratings for PLs and PSGs (see Table E-2), average MA values were 2.9 and 2.8, respectively. All of these values are close to the scale point (that is, 3) signifying "important". These ratings indicate beliefs that the NTC setting creates performance conditions in which leadership is an active ingredient and, therefore, that this setting is potentially suitable for measuring leadership.

There were, however, some missions in which leadership was rated less than important. OC notes indicated that this was usually due to mission conditions, such as a unit's being bypassed in a defense or lack of vehicles to mount a meaningful offense. One implication is that free-play missions are not necessarily equally appropriate for research and measurement of leadership.

Sensitivity to range of leader performance--Assuming some range in leaders' performance abilities, correspondence between this actual range and the range of the measurement scale used, and a performance context eliciting this variation, one would expect that a measurement method would produce values that reflect the full range of scale values. Measurement potential from this point of view was examined in terms of the variation of values across leaders and across missions.

Table 2 describes the MA values for these judgments and their variation across PLs and PSGs. Average values tended to fall at or just below the scale mid-point of 2.5, as is desirable. There were no significant differences between the values for PLs and PSGs. Standard deviations ranged from about .5 to .6, indicating that average judgments generally ranged from about 2.0 to 3.0 ("somewhat below standard" to "meets standard"). The obtained range of values shows that the full potential range of the scales tended to be used.

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**Table 2**
Descriptive Statistics of Mission-Average Measures of Leadership
Task Performance

| Tasks | Platoon Leader | | | Platoon Sergeant | | |
|---|---|---|---|---|---|---|
| | $\overline{X}$ | Std | MAX/MIN | $\overline{X}$ | Std | MAX/MIN |
| Planning | 2.3 | .5 | 3.5/1.2 | 2.2 | .5 | 3.0/1.2 |
| Communication | 2.5 | .5 | 3.8/1.0 | 2.5 | .5 | 3.4/1.3 |
| Supervision | 2.4 | .5 | 3.3/1.0 | 2.4 | .5 | 3.8/1.0 |
| Initiative | 2.5 | .6 | 3.5/1.0 | 2.4 | .6 | 3.5/1.0 |
| Soldier/Team Development | 2.6 | .6 | 3.7/1.0 | 2.6 | .6 | 4.0/1.2 |

Note. Means, standard deviations, and obtained ranges of MA-PERF measures. Sample sizes of 79-81 for platoon leaders and 71-76 for platoon sergeants.

Corresponding results for the SUM ratings of the 11 leadership tasks, made at the end of rotation, are shown later (Tables 7 and 9). The pattern of results is similar to that in Table 2, with mean values ranging from 2.1 to 2.6 and with standard deviations of about .8. Again, values for PLs and PSGs were essentially the same.

To examine variation in performance across missions, the standard deviation of values for a task across the FOF missions was calculated for each leader. The average of these standard deviations values was then computed for each tasks. The average standard deviations ranged from about .4 to about .6 for the various scales, indicating that the platoon OCs did use the instruments to record differences in performance from mission to mission.

These results suggest that the measurement method captured variation in leadership performance in NTC exercises. Results on reliability and validity, presented next, indicate the meaningfulness of this variation.

## Measurement Reliability and Validity

Table 3 summarizes correlations between measures of performance and effectiveness based on platoon OC judgments. Table 4 presents correlations between platoon and company OC judgments of PL leadership effectiveness and platoon/unit effectiveness. Table 3's correlations between MA-PERF and SUM-PERF bear on the test-retest reliability of the measures of leadership performance since they are averages of judgments made at the time of performance (MA-PERF) and summary judgments (SUM-PERF) made after all missions had been completed. The correlations in Table 4 bear on inter-rater reliability; however, they are correlations between measures of effectiveness as opposed to measures of performance.

The evidence on measurement reliability was mixed. That is, correlations between MA-PERF and SUM-PERF were statistically significant and strong for both PLs (.89) and PSGs (.77). The moderately strong and significant correlations between the platoon and company OCs' judgments of PL leadership effectiveness also indicate the potential for reliable measurement given differences in the duties of company and platoon OCs in NTC exercises and the resulting differences in their perspectives and observational opportunities. However, this evidence for reliability was weakened by the moderate to high correlations between most measures in Table 3. This pattern of intercorrelation suggests that the correlations were due to common variance or a halo effect in the measures based on platoon OCs' judgments. Halo is especially suspect in the correlation of

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# Table 3

Correlations between Measures of Leadership Performance and Measures of Leadership and Unit Effectiveness:  Platoon OC Judgments

| Platoon Leader (PL) | PL | | | | PSG | | | | P/U | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| MA-PERF (1) | • | .89 (69) | .83 (75) | .75 (46) | .85 (70) | .66 (69) | .60 (71) | .44 (46) | .61 (57) | .63 (70) |
| SUM-PERF (2) | | • | .84 (70) | .75 (55) | .70 (63) | .67 (81) | .49 (66) | .40 (55) | .59 (51) | .74 (83) |
| MA-EFF (3) | | | • | .74 (49) | .63 (67) | .50 (69) | .67 (74) | .25 (49) | .65 (57) | .65 (72) |
| SUM-EFF (4) | | | | • | .42 (42) | .41 (53) | .40 (56) | .36 (56) | .51 (30) | .61 (56) |
| **Platoon Sergeant (PSG)** | | | | | | | | | | |
| MA-PERF (5) | | | | | • | .77 (63) | .77 (67) | .58 (42) | .59 (52) | .56 (63) |
| SUM-PERF (6) | | | | | | • | .74 (65) | .76 (53) | .66 (51) | .66 (81) |
| MA-EFF (7) | | | | | | | • | .59 (47) | .59 (54) | .42 (68) |
| SUM-EFF (8) | | | | | | | | • | .33 (30) | .50 (56) |
| **Platoon/Unit (P/U)** | | | | | | | | | | |
| MA-EFF (9) | | | | | | | | | • | .70 (51) |
| SUM-EFF (10) | | | | | | | | | | • |

Note:  Correlations of .36 or greater statistically significant ($p \leq .05$).  Sample per correlation in parentheses.

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Table 4

<u>Correlations between Platoon and Company OCs' Judgments of Leadership (PL & PSG) & Unit Effectiveness</u>

|  | Comany OC | |
| --- | --- | --- |
| <u>Platoon OC</u> | <u>PL MA-EFF</u> | <u>PL SUM-EFF</u> |
| <u>Platoon Leader (PL)</u> | | |
| MA-EFF | .46<br>(39) | .30<br>(40) |
| SUM-EFF | .05<br>(35) | .43<br>(43) |
| <u>Platoon Sergeant (PSG)</u> | | |
| MA-EFF | .12<br>(37) | .06<br>(38) |
| SUM-EFF | .20<br>(35) | .17<br>(43) |
| <u>Platoon/Unit (P/U)</u> | | |
| MA-EFF | .59<br>(24) | .38<br>(26) |
| SUM-EFF | .50<br>(35) | .49<br>(43) |

<u>Note</u>: All correlations of .38 or greater statistically significant ($p \leq .05$). Correlation of .30, $p \leq .07$ Sample per correlation in parentheses.

.85 between PL and PSG MA-PERF. Those measures were averages of 20 to 30 judgments, and such averaging would have produced scores reflecting the common variance. That the measures captured some differentiation, however, is indicated by the nonsignificant correlations (Table 4) between company OCs' judgments of PL leadership effectiveness and platoon OCs' judgments of PSG effectiveness.

Results on measurement validity provide some further evidence of differentiation and also suggest a possible source of the halo. Measures of leadership performance were strongly correlated with measures of leadership effectiveness for both PLs (correlations between PERF and EFF measures ranging from .75 to .84) and PSGs (correlations ranging from .58 to .77). These correlations are compatible with the premise that CAL's framework identifies the leadership tasks necessary for warfighting effectiveness. Moreover, differentiation was obtained in that with one exception (the correlation between PS MA-PERF and PSG SUM-EFF compared to the correlations between PS MA-PERF and PL SUM-EFF), correlations between performance and effectiveness for the same leader were significantly higher than correlations between this leader and the comparable measure of effectiveness of the other leader. This pattern was also obtained in the correlations between company and platoon OCs judgments of effectiveness (Table 4) so that with one exception (the correlation of the company OC judgments of PL SUM-EFF with the platoon OC judgments of PL SUM-EFF compared to the correlation of the same company OC judgments with the platoon OC of PSG SUM-EFF), correlations were significantly ($p \leq$ .05, one tailed) greater between ratings of PL EFF by the two sets of OCs than between the company OC ratings of PL EFF and the platoon OC ratings of PSG EFF.

The strong positive correlations between PL and PSG performance and platoon effectiveness--both mission-level (PLT MA-Eff) and overall rotation (PLT SUM-Eff)--seem to suggest further the construct validity of the performance measures. Like the correlations with leadership effectiveness, the leadership performance and unit effectiveness correlations were probably inflated by halo. It is also possible that perceptions of unit effectiveness were the basic source of the halo.

That is, Table 3 shows that judgments of PL and PSG leadership performance were strongly associated. Table 5 displays, for SUM-PERF judgments, the correlations between tasks for each leader and the correlations between leaders for each of the nine tasks judged in all rotations. Table 6 displays the same correlations based on MA judgments. Both tables indicate that performance of the same task by the two leaders tended to be as highly--if not more highly--correlated as performance of different tasks by the same leader. This suggests that an aspect of mission performance effectiveness was possibly the basic

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# Table 5

Correlations between Leadership Task Performances of Platoon Leaders and Platoon Sergeants: Performance for the Overall Rotation

| Platoon Sergeant (PSG) | Platoon Leader (PL) | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Planning (1) | .59 | .61 | .60 | .62 | .67 | .62 | .52 | .45 | .52 |
| Communication (2) | .61 | .66 | .74 | .68 | .75 | .63 | .64 | .42 | .59 |
| Supervision (3) | .69 | .54 | .69 | .65 | .68 | .63 | .77 | .46 | .59 |
| Initiative (4) | .56 | .63 | .70 | .60 | .61 | .72 | .62 | .51 | .61 |
| Solider/Team (5) Development | .64 | .62 | .64 | .67 | .62 | .68 | .60 | .45 | .62 |
| Decision Making (6) | .62 | .62 | .66 | .61 | .57 | .66 | .64 | .45 | .67 |
| Teaching/Counseling (7) | .43 | .50 | .69 | .58 | .54 | .69 | .71 | .55 | .62 |
| Technical/Tactical (8) | .41 | .43 | .51 | .61 | .52 | .43 | .59 | .63 | .55 |
| Flexibility (9) | .48 | .50 | .47 | .50 | .46 | .60 | .53 | .28 | .69 |

Note: SUM judgments of PL and PSG performance on the nine tasks common to all rotations. Top half: Correlations between judgments of task performance by PLs. Diagonal: Correlations between judgments of PLs' and PSGs' performance of the same task. Bottom half: Correlations between judgments of task performance by PSGs. Sample per correlation ranged from 82-85. All correlations statistically significant, $p < .05$.

Table 6
Correlations between Leadership Task Performances of Platoon
Leaders and Platoon Sergeants:  Performance during Missions

| Platoon Sergeant (PSG) | Platoon Leader (PL) | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Planning (1) | .87 | .80 | .79 | .75 | .67 |
| Communication (2) | .78 | .83 | .78 | .74 | .74 |
| Supervision (3) | .75 | .75 | .85 | .78 | .74 |
| Initiative (4) | .74 | .77 | .83 | .83 | .75 |
| Soldier/Team (5)<br>  Development | .61 | .70 | .73 | .73 | .87 |

Note.  Mission average judgments of PL and PSG performance on the
five tasks judged per mission.  Top half:  Correlations between
judgments of task performance by PLs.  Diagonal:  Correlations
between judgments of PLs' and PSGs' performance of the same task.
Bottom half:  Correlations between judgments of task performance
by PSGs.  Samples per correlation ranged from 71-81.  All
correlations statistically significant ($p \leq .01$).

framework for judgment of individuals: the perceived quality of the leadership functions or processes represented by the leadership tasks. Within these perceptions of unit effectiveness, PLs and PSGs were then assessed on observations of how they in their separate roles had contributed to the processes represented by the tasks. This interpretation accounts for the equally strong correlations of PL and PSG leadership performance with unit effectiveness and for the strong intercorrelations between their performance of the same task: perceptions of the processes, themselves as elements of unit effectiveness, would have driven overall judgments of the separate leaders. It would also account for the differentiation obtained in correlations between leadership performance judgments and judgments of leadership effectiveness: PLs and PSGs would have been judged on performances reflecting their roles in the leadership processes and, thus, performances relatively more specific to effectiveness of their own roles.

In this assessment of the results, the measurement methods did not elicit judgments of leadership performance independent of the judgments of either unit effectiveness or the organizational leadership processes represented by the leadership tasks. However, the measures do appear to have captured variation unique to the role and effectiveness of each leader within the overall leadership process in the organizational context.[6] In this respect, CAL's framework provided a meaningful basis for assessment of organizational leadership. The measurement method, and possibly the leadership framework itself, did not yield performance assessments that were independent for the two leadership roles or that clearly differentiated leadership processes from organizational effectiveness.

This assessment, it should be noted, describes a judgment process congruent with the primary focus and operating principles of the Army's CTCs. The CTCs focus on providing collective training in highly realistic simulations of combat and not the training of individual soldiers outside of their organizations. Given this focus, units tend to be appraised at the organizational level, that is, on the unit tasks pertinent to a mission or the organizational functions involved in mission performance. Methods that allow for independent assessment of individual leadership positions would possibly require a change in this focus or direct more resources at measurement than the

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[6] In fact, if the correlations both involving MA-PERF and crossing PLs and PSGs were deleted from Table 3, the remaining correlations would provide relatively strong support for the measurement method. The MA-PERF measures would have centered on the halo effects of unit effectiveness and organizational leadership processes since, as indicated earlier, they were averages of at least 20 judgments.

methods used in this effort. This assessment also points to the need for sound measures of unit performance.

## ISSUES OF LEADERSHIP

### Leader Performance-Unit Effectiveness

The strong, positive relationships between leadership task performance (MA-Perf and SUM-Perf) and unit effectiveness were presented in the section on validation (Table 3). As discussed there, these data support the view that leadership processes in a unit are important elements of unit effectiveness. The ratings of the importance of leadership for mission accomplishment directly indicate this view. While the impact of leadership performance on unit effectiveness is not the main focus of this report, the apparently high impact indicated in these data suggests the potential for improving unit effectiveness through improvements in leadership development.

Results from ARI's earlier NTC research (Rachford et al., 1986) suggested the possibility that the leadership-unit effectiveness relationship was higher for PLs than PSGs. Such a result would be consistent with the traditional view that the PL is the primary director of platoon activities in the field. However, current results do not indicate differences between PLs and PSGs in the strengths of relationships between leadership performance and platoon/unit effectiveness.

### Platoon Leader Leadership

Table 7 summarizes judgments of PL leadership performance made at the end of the rotation (SUM). It also contains correlations between these judgments and SUM judgments of platoon/unit effectiveness.

On all tasks, means were similar and suggest little variation across tasks in average quality of performance and, therefore, judgments describing the quality of PL leadership performance as having been between "below standard" and "meeting standard" on each task. SUM judgments of each leadership task were significantly correlated with perceived platoon effectiveness during the rotation. Of the 13 tasks, nine showed strong correlations (of about .6) with SUM-EFF; even the lowest correlation was moderately high (.40).

Table 8 displays correlations between SUM judgments of PL performance on each task and SUM-EFF judgments of PL effectiveness. Table 8 also summarizes the frequency that platoon OCs nominated each task as one of the "four most important" for PL effectiveness in exercises like those at the NTC. In Table 8, tasks are ordered in the frequency (from most to least) of nomination as most important.

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Table 7
Platoon Leader (PL) Leadership Task Performance and Platoon/Unit
Effectiveness

| Leadership Task | Level of Task Performance | | Correlation with Platoon Effectiveness |
|---|---|---|---|
| | Mean | Std. Dev | |
| Planning | 2.1 | .7 | .58 |
| Communication | 2.4 | .7 | .55 |
| Supervision | 2.2 | .8 | .65 |
| Initiative | 2.3 | .8 | .59 |
| Soldier/Team Development | 2.5 | .8 | .60 |
| Decision Making | 2.3 | .8 | .65 |
| Teaching/Counseling | 2.2 | .8 | .62 |
| Technical/Tactical | 2.3 | .7 | .49 |
| Flexibility | 2.5 | .8 | .59 |
| Innovation | 2.2 | .7 | .40 |
| Boldness | 2.4 | .7 | .48 |
| Trust in Subordinates | 2.3 | .8 | .54 |
| Motivate Subordinates | 2.6 | .9 | .58 |

Note. End-of-rotation (SUM) ratings of levels of PL performance,
with first nine tasks rated all rotations ($n$ = 82-85), innovation
and boldness rated last two rotations ($n$ = 53, 56, respectively),
and trust in subordinates and motivation rated first mission only
($n$ = 28, 29, respectively). Correlations (all, $p \leq .01$) of SUM
ratings of PL performance with SUM ratings of platoon/unit
effectiveness, with sample sizes comparable to those for
corresponding mean levels of performance ratings.

Table 8
Leadership Tasks Associated with Platoon Leader (PL) Leadership
Effectiveness

| Leadership Task | Correlation with Platoon Leader Effectiveness | Selection as "Most Important" | |
|---|---|---|---|
| | | Frequency | Rank |
| Planning | .67 | 47 | 1 |
| Technical/Tactical | .51 | 42 | 2 |
| Communication | .61 | 35 | 3 |
| Decision Making | .51 | 32 | 4 |
| Initiative | .60 | 25 | 5 |
| Supervision | .65 | 15 | 6 |
| Flexibility | .59 | 13 | 7 |
| Teaching/Counseling | .61 | 5 | 8 |
| Boldness | .68 | 5 | 9 |
| Soldier/Team Development | .61 | 3 | 10 |
| Innovation | .56 | 1 | 11 |

Note. Correlations of end-of-rotation ratings of PL leadership performance (SUM-PERF) with SUM-EFF ratings of PL leadership effectiveness, (ns of 53-56). All correlations statistically significant ($p \le .01$). Frequency of selection (and ranking of frequencies) as one of four "most important components for platoon leader effectiveness" by platoon OCs at end of two later rotations.

As the results on measurement validity might predict, the correlations in Table 8 closely approximate those in Table 7. That is, all were moderately to strongly correlated (and statistically significantly so) with perceived overall PL leadership effectiveness. More differentiation in associations of leadership performance and effectiveness was forced by the nominations of most important tasks. The four most frequently nominated for PLs were planning, technical/tactical proficiency, communication, and decision making. Over half of the platoon OCs serving in this research nominated each of those four tasks.

To the extent that leadership was actually judged on the basis of the performances of PLs, the mean ratings of task performance suggest that PL performance can be improved by leader development programs clearly focused on the leadership tasks in CAL's framework. However, such a conclusion should be made cautiously given the halo in the data. The halo likely exaggerated correlations with effectiveness and masked differences both in associations with leadership and unit effectiveness and in needs for improvement inferred from these differences. Also, results presented earlier indicated that judgments of a leader's performance were not independent of unit effectiveness and the leadership processes in a unit.

The leadership tasks nominated by OCs as most important emphasize aspects of the PL role oriented on effective task accomplishment by the unit: sound technical/tactical performance, planning for effective use of this performance capability, and taking actions (making decisions and communication) for implementation of plans. This view is generally confirmed by results from two related efforts.

After returning to their home posts, a sample of unit members in the first rotation reported here were presented the list of 11 leadership tasks (see Table 1) for which OCs had made SUM performance judgments (O'Mara, 1989). They then assigned each to one of three categories of relative criticality for combat mission performance: "critical", "important", or "less important." A total of 49 squad members and squad leaders performed this task, under instructions to identify the four tasks most critical for PL leadership. The four tasks most frequently identified matched those most frequently nominated by OCs: planning (80%), decision making (about 77%), technical/tactical (about 75%), and communication (about 55%). When company commanders ($n = 8$) made the sorting, a somewhat different set of tasks emerged as most critical for PL performance. For company commanders, initiative and motivating others tied as most frequently identified (about 78%), with technical/tactical proficiency, soldier/team development, and teaching/counseling tied as the next most frequently nominated (about 45%).

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Results of a second investigation replicated the nominations of OCs and the squad members and squad leaders. In that effort (Julien & Siebold, 1990; Oliver & Julien, 1990), leaders in a battalion having completed a JRTC rotation indicated which three of 10 leadership tasks (the nine common to all three rotations here, plus "professional ethics") were most important for JRTC effectiveness. The three tasks that the participating PSGs (n = 14) most frequently identified for PL performance were: planning (86%), technical/tactical proficiency (57%), and decision making (64%). Squad leaders (n = 42) most frequently identified planning (81%) and communication (64%) as most important for PLs; decision making, technical/tactical proficiency, and flexibility were closely tied as the third most frequent selection (about 40%). Company commanders and higher leaders most frequently chose technical/tactical proficiency (62%), initiative, and decision making (50% for both of the latter).

Thus, there appears to be general agreement between NTC OCs and PLs' subordinates about the PL tasks that are relatively most important for unit success in tactical setting. These are tasks directly involved in accomplishment of assigned mission. Additional data from superiors are needed to determine whether these role perceptions are shared by leaders senior to PLs.

## Platoon Sergeant Leadership

Table 9 summarizes judgments of PSG leadership performance made at the end of the rotation (SUM). It also contains correlation between these SUM judgments and SUM-EFF of platoon/unit effectiveness.

As for PLs (Table 7), mean judgments of PSGs' performance levels varied little across tasks and consistently described the quality of PSG leadership performance as having fallen between "below standard" and "meeting standard." Correlations of SUM judgments of task performance and SUM-EFF for the platoon/unit were significant and moderately strong to strong. Two correlations seem to stand out as relatively stronger: supervision and teaching/counseling.

Table 10 displays correlations between SUM judgments of PSG performance of each task and summary judgments of overall PSG leadership effectiveness (PSG SUM-EFF). Table 10 also summarizes the frequency that OCs nominated each task as one of the "four most important" for PSG effectiveness in combat exercises.

As for the PL , the strengths of the correlations in Table 10 closely approximate the correlations with platoon/unit effectiveness (Table 9). That is, all were moderately to strongly correlated (and statistically significantly so) with perceived overall PSG leadership effectiveness. Supervision again showed a somewhat stronger association.

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**Table 9**

**Platoon Sergeant (PSG) Leadership Task Performance and Platoon/Unit Effectiveness**

| Leadership Task | Level of Task Performance | | Correlation with Platoon Effectiveness |
|---|---|---|---|
| | Mean | Std. Dev | |
| Planning | 2.2 | .7 | .48 |
| Communication | 2.4 | .7 | .44 |
| Supervision | 2.3 | .8 | .66 |
| Initiative | 2.3 | .8 | .52 |
| Soldier/Team Development | 2.6 | .8 | .49 |
| Decision Making | 2.3 | .8 | .54 |
| Teaching/Counseling | 2.3 | .8 | .61 |
| Technical/Tactical | 2.3 | .8 | .46 |
| Flexibility | 2.5 | .8 | .42 |
| Innovation | 2.3 | .7 | .44 |
| Boldness | 2.3 | .7 | .41 |
| Trust in Subordinates | 2.5 | .8 | .50 |
| Motivate Subordinates | 2.6 | .9 | .49 |

Note. End-of-rotation (SUM) ratings of levels of PSG performance, with first nine tasks rated all rotations ($n$ = 82-85), innovation and boldness rated last two rotations ($n$ = 53, 56, respectively), and trust in subordinates and motivation rated first mission only ($n$ = 27, 28, respectively). Correlations (all, $p \leq .01$) of SUM ratings of PSG performance with SUM ratings of platoon/unit effectiveness, with sample sizes comparable to those for the corresponding means of level of performance ratings.

Table 10
**Leadership Tasks Associated with Platoon Sergeant (PSG)**
**Leadership Effectiveness**

| Leadership Task | Correlation with Platoon Sergeant Effectiveness | Selection as "Most Important" Frequency | Rank |
|---|---|---|---|
| Planning | .48 | 9 | 7 |
| Technical/Tactical | .42 | 35 | 3 |
| Communication | .64 | 26 | 4 |
| Decision Making | .62 | 7 | 8 |
| Initiative | .66 | 18 | 6 |
| Supervision | .73 | 49 | 1 |
| Flexibility | .43 | 6 | 9 |
| Teaching/Counseling | .57 | 26 | 5 |
| Boldness | .59 | 2 | 11 |
| Soldier/Team Development | .63 | 42 | 2 |
| Innovation | .49 | 4 | 10 |

Note. Correlations of end-of-rotation ratings of PSG leadership performance (SUM-PERF) with SUM-EFF ratings of PSG leadership effectiveness, (ns of 53-56). All correlations statistically significant ($p \leq .01$). Frequency of selection (and ranking of frequencies) as one of four "most important components for platoon sergeant effectiveness" by platoon OCs at end of two later rotations.

In Table 10, the order of task presentation replicates the order in Table 8 to allow comparison of the tasks nominated as "most important" for PLs and PSGs. Readily apparent is that the two most frequently nominated for PSGs--supervision and soldier/team development--were not among the tasks most frequently nominated for PLs. The third and fourth most frequently nominated for PSGs, however, were the second and third most frequently nominated for PLs: technical/tactical proficiency and communication.

These findings reinforce the implications for training discussed earlier for PLs. They seem to add the importance of taking into account differences in leadership roles. More specifically, the data suggest that tasks representing domains such as technical/tactical proficiency and communication are commonly critical to both PLs and PSGs. However, the criticality of other leadership tasks varies with the leadership role. The findings suggest, for example, that supervision and soldier/team develop are relatively more significant for PSGs. However, the findings are not consistent as to whether these or other tasks distinguish the role of PSG. Squad members and squad leader (n = 49) in the unit having trained at the NTC (O'Mara, 1989) also identified the four most critical tasks for PSG performance. Most frequently selected was communication (about 62%), followed almost equally frequently (about 45%) by planning, decision makings, soldier/team development, and technical/tactical proficiency. In the unit having trained at the JRTC (Oliver & Julien, 1990), PSGs (n = 14) selected the tasks most important for their own role. The order of selections was: communication (64%), followed by technical/ tactical proficiency (50%), and with planning and initiative tied as the third most important (43%). Results of this and the other two investigations point to the tasks also important to PLs--technical/tactical proficiency and communication. However, the data do not consistently indicate the importance of supervision or soldier/team development for PSGs.

The PL-PSG Leadership Team

Table 3 shows that the leadership performance of the PL and PSG were positively correlated: platoons with effective PLs tended to have effective PSGs and vice versa. These results, combined with the leader-unit performance correlations, suggest that although a unit may sometimes do well with only one effective leader, effective unit performance is usually associated with the effectiveness of both the PL and PSG. This view is supported by prior NTC research (Rachford et al., 1986; Twohig & Tremble, 1987a) and data from the first rotation on components of the PL-PSG relationship (Appendix E). It is also supported by OC field notes that attributed improvements in platoon performance to improvements in the PL-PSG working relationship.

These results generally describe the effective PL-PSG relationship as a team of leaders who are competent as individuals and who have a relationship in which they share--through consultation and information exchange--their skills. In addition to sharing, the effective PL-PSG relationship involves mutually and clearly recognized areas of responsibility. The various role allocations possible and conditions affecting their effectiveness and development are important topics for further research.

As discussed earlier, the strength of the PL-PSG correlations may have partly reflected a halo effect from the judged quality of the organizational processes served by the leadership tasks of both the PL and PSG. The notes made by OCs and SMEs reflected the view that such processes, and the leadership tasks involved in them, are the joint responsibilities of PLs and PSGs. For example, field notes indicated that while PSGs may have primary responsibility for carrying out such specific supervisory activities as pre-combat inspections, PLs remain accountable for those activities due to their overall responsibility for the quality of platoon supervision. Similarly, PLs were viewed as primarily responsible for planning, but PSGs are expected to contribute. Thus, the high correlations possibly indicate views and assumptions about the shared responsibilities and contributions of PLs and PSGs to the leadership processes represented by the leadership tasks.

## CAL's Leadership Framework

These findings indicate that the leadership tasks in CAL's framework are related to leadership and unit effectiveness. If the assessment presented earlier is correct, evidence is clearest about (1) the importance to unit effectiveness of the organizational processes represented by CAL's tasks and (2), within this context, the importance of the combined tasks to leadership effectiveness. However, the data collected through the performance measures probably yielded spuriously high estimates of the importance of the tasks and did not show differences in the relative importance of the leadership tasks.

While the performance measures failed to discriminate between the importance of the leadership tasks in CALs' framework, OCs' task nomination provided some indication of the relative importance of the tasks for PLs and PSGs. Each task was nominated by at least one OC for both PLs and PSGs. This indicated the importance of all tasks. For PLs, the tasks most frequently nominated by OCs corresponded with nominations made by unit members as part of other investigations. This indicates a relatively clear role definition for PLs that centers on leadership tasks directly pertinent to mission performance: planning, technical/tactical proficiency, communication, and decision making. Task nominations did not yield role definitions

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for PSGs that corresponded with results of related research. This discrepancy for PLs and PSGs and yet the apparent interdependence of their performance leadership effectiveness points to the importance of research on aspects of team leadership. Such research is significant since role expectations were possibly a basis for the judgment process described earlier: judgments of task quality in terms of observations or inferences about a leaders' contributions to organizational processes.

CAL's goal is a leadership model that has general applicability and that is yet useful for leader assessment. To guide assessments of individual leaders, it may be necessary to refine the present framework by tailoring task descriptions and standards to the level of leadership to which they apply. Such a refinement could yield measures that better differentiate between leaders and between their performance of different tasks.

Even with more differentiated task definitions, the task structures for leadership roles may be such that separate leadership tasks and their assessment will remain correlated to some extent. This has been suggested by ARI's research on leader performance requirements. Through successive interviews with small groups of leaders, the leader requirements research identified 560 leader tasks and 20 categories, referred to as duty areas, into which the tasks were placed. Questionnaires were then administered to commissioned and noncommissioned officers who rated the significance of each task to their current duty positions. For both commissioned (Steinberg & Leaman, 1990b) and noncommissioned (Steinberg & Leaman, 1990c) officers, the duty areas provided a meaningful framework for describing differences in the significance of tasks to leaders in different ranks, in different leadership positions, etc. The significance ratings were later factor analyzed (Steinberg & Leaman, 1990a). Rather than replicating the duty areas, the factors were often defined by tasks from more than one duty area. These findings seem to indicate that the structure of leadership is such that while separate leadership components--broad tasks (CAL) or duty areas--can be identified, they are actually interdependent in the on-the-job performances representing them. To the extent that the leadership components are themselves interdependent, this interdependence will likely be found (and, depending on the purpose of assessment, perhaps should be found) in performance assessments made in on-the-job settings or realistic simulations of such settings.

## PERFORMANCE IN TACTICAL SIMULATIONS

Post rotation group discussions and field notes (separate for OCs and SMEs) produced information on the measurement methods used in this research. Information pertinent to possibilities for refinement is summarized here.

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## Indicators of Leadership Performance

Examination of information from the group discussions suggested that SMEs had used three general types or categories of information in their attempts to judge performance of the leadership tasks. Two of the categories are as indicative of organizational leadership processes as they are of the performances of individual leaders. One of these categories consisted of outcomes pertinent to the tasks. This included outcomes associated with performance of the overall unit (e.g., mission accomplishment), with the performance expected of subordinate leaders (e.g., correct execution of assigned or implied tasks), or with the state of the unit or its members (e.g., subordinates' understanding of the mission, properly dressed soldiers, properly maintained equipment). The second category involved adherence to procedures presumed to help leader effectiveness. Examples were requests for "briefbacks" from subordinates, delegation of tasks, and consultation with subordinates. The third category more directly focused on the leader judged and consisted of tasks or behaviors that could be personally observed by the SME and that directly represented or exemplified a leadership component.

The notes recorded by OCs in the last two rotations identified leader behaviors that they had considered important in judging leader performance. Notes were made for the five tasks judged per mission.

For planning, OCs sometimes examined the comprehensiveness of the produced plan and whether it was more than repetition of the company plan. This involved examining whether the plan was sufficiently detailed and whether it included all activities (such as security and logistics) important to the mission. OCs also noted whether the plan was tactically sound. The organization of the plan and correct prioritization of tasks were also important. It was important that the plan include steps, such as conducting rehearsals and reconnaissance, that can easily be neglected due to other more immediately pressing demands. Contingency plans were also mentioned as a sign of good planning. Comments were made as to whether PSGs had consulted on the plan and had made needed suggestions for improvement.

The most frequently noted characteristic of effective communication was keeping subordinates informed, which was seen as a responsibility of both the PL and the PSG. The next most frequently noted areas were command and control and good communication with company level, which were more frequently mentioned in terms of PL performance. Platoon-level leaders were expected to question superiors to clarify their understanding. Effective communication depended on PSGs' keeping their PLs informed. Effective communication was also seen to depend on certain specific skills and techniques such as clarity of

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expression, good briefing skills, use of graphics, and the use of alternative means of communication (like signal flags).

For effective supervision, the key behaviors involved clear task specification followed by checks on task completion/quality. Pre-combat checks were discussed as an important part of the PSG's role in supervision. Supervision during mission execution was also noted, for instance, actions insuring the platoon was in the correct movement formation. Certain techniques for supervision were mentioned such as use of subordinate leaders to check on conditions, sometimes during "backbriefs", and observation of rehearsals to determine task understanding.

For soldier/team development, OCs focused on the maintenance of combat readiness and teamwork. Notes indicated that effective leaders had done such things as: used slow periods to conduct training in team and individual skills, enforced discipline standards, and attended to subordinates' physical needs.

For initiative, effective leaders were described as having made decisions to improve their unit's immediate situation. For some OCs, initiative meant making changes in previously planned action, and failure to make such changes signified a lack of initiative. Taking over for a "slain" or absent leader provided one opportunity for showing initiative. These examples define initiative in terms of non-routine situations. Other examples seemed to describe relatively standard leader responsibilities, such as conducting rehearsals or inspections. The SMEs in the first rotation had given similar examples and, when questioned about them, concluded that such examples had been signs of proactivity by the leader. The point seems to have been that effective leaders need to keep going and take actions to improve their unit's preparation or execution, without direct instructions to do so.

The three categories of outcomes, procedures, and performances have somewhat loose boundaries, but their delineation may help in planning and in instructing observers on the evidence that can or should serve as standardized indicators of performance quality. Discussions with the SMEs underscored some of the challenges in developing such guidance. They include variation by leadership task in the kinds of evidence available for judging task performance. They also include a factor already discussed: overlap in the evidence indicative of task performance. In a complex performance setting like the NTC, one piece of evidence is not necessarily indicative of one task exclusively. Rather, the evidence may relate to several leadership tasks. For example, if leaders supervise to see if subordinates are using slack time usefully, they make take the initiative to set up some training with an effect on soldier/team development. The training will require some planning, and its execution will require some form of communication (at least of

instructions). Thus, when a leader performs a related set of behaviors, several leadership tasks may be involved. To the extent that separate assessment of each of CAL's leadership tasks is important, future development of measurement methods needs to seek approaches that yield judgments based on evidence which, to the extent possible, is unique to each task judged.

## Conditions Affecting Measurement

In addition to the performance indicators available for judging leadership, the group discussions produced information about conditions of performance in a simulated combat setting that could affect judgments of leadership. Such conditions also need to be dealt with in further development of a leader performance measurement system. The principal conditions included:

(a)   Involvement of a platoon in the execution phase of the mission. This determined the opportunities available for observation of leadership in the execution phase.

(b)   Actions of superior leaders that affected the types and amounts of activities in which subordinate leaders could engage. Frequently discussed examples were "micromanagement" by superior leaders and the timing of receipt of operations orders from the next higher echelon that restricted subordinate leaders' opportunities to exercise their own planning skills.

(c)   Quality of other leaders in the team and the working relationships among leaders. These were often cited as conditions that could detract from (or were needed for) the manifest quality of performance of a single leader in the team.

(d)   Potential need for more information than may be available for attributing "cause." That is, it was sometimes found that without other contextual information, an objective indicator was insufficient for confident attribution to the capability of a particular leader. For example, a platoon's accomplishment of a particular task can be insufficient evidence of leadership effectiveness without additional information about the orders from the company level and the standard operating procedures under which the platoon was operating.

(e)   Opportunity for observation of key leader behaviors. Various conditions were identified that sometimes prevented the assembly or acquisition of evidence which was otherwise available. Such conditions are probably more likely when an observer has to monitor more than one leader.

## SUMMARY AND CONCLUSIONS

A method for measuring leadership performance in tactical field exercises based on CAL's framework of leadership tasks and standards was developed and applied in three rotations at the NTC. The method was targeted for measuring the leadership of PLs and PSGs in exercises at the NTC. The method called for judgments of PL and PSG leadership performance relative to standard by platoon OCs both for the separate missions of an NTC rotation and for the rotation as a whole. Platoon OCs also made judgments of the overall leadership effective of PLs and PSGs and judgments of overall unit effectiveness with respect to mission accomplishment in order to assess the measurement of leadership performance. In the second and third rotations, Company OCs made judgments of PL and platoon/unit effectiveness to assess inter-rater reliability of OC judgments.

The data support the following conclusions:

(1) The measurement method produced performance judgments of the separate leadership tasks for a leader (PL or PSG) that were interdependent with: platoon/unit effectiveness, performance of different tasks by the same leader, and performance of the same task by the two different leaders. This interdependence likely inflated the numerical estimates of association between leadership performance and unit effectiveness. It also likely masked variation in the measured performance levels of the leadership tasks.

(2) CAL's framework defines leadership tasks that appear to be a meaningful basis for measuring leadership processes in a unit and the relationship of these processes to unit performance in realistic tactical simulations. Aggregated measures of these tasks for a leader are also meaningfully associated with the overall leadership effectiveness of the leader.

(3) The measurement method did not distinguish differences between the tasks and, therefore, differences in their relative importance to leadership or unit effectiveness. For OCs and unit members, there is nevertheless some consistency in their views of the leadership tasks that are most important for unit effective-ness in combat settings, especially the tasks important for PLs.

(4) The leadership performance measurement method used in the present research needs revision so as to yield measures of leadership that are more independent of the organizational leadership processes in the performance setting and that are more independent across the separate components of leadership. This may require a more elaborated framework of leadership that specifies the performance attributes that distinctively differentiate both the separate leadership components and the leadership behaviors expected of different types of leaders.

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## APPENDIX A

### END-OF-ROTATION INSTRUMENT FOR OBSERVER CONTROLLERS

OC TEAM _____

TASK FORCE _____

COMPANY-TEAM _____

PLATOON _____

PARENT BATTALION/COMPANY/PLATOON _____

The enclosed instrument was used after rotations 2 and 3. A somewhat different instrument was used after rotation 1. (See Table 2 in the main body of this report for major differences). For all rotations, the observers made ratings with respect to 11 leader performance tasks. The same 9 were rated after each rotation. The tasks boldness and innovation were only rated after rotations 2 and 3, as shown on the enclosed instrument. For rotation 1, the tasks motivate subordinates and trust in subordinates were rated rather than boldness and innovation.

The ratings of PL and PSG effectiveness shown in the enclosed instrument were not done for rotation 1 and neither were the groupings of tasks by importance.

Questions unique to the rotation 1 instrument involved the effects of sleep and conditions that affect performance. The full rotation 1 instrument is avaiable from the second author.

**INSTRUCTIONS:**

For the next two pages, based on the rotation as a whole, please indicate how well the Platoon Leader (PL) and the Platoon Sergeant (PSG) in your platoon performed relative to doctrinal standards for each of the 11 competencies listed.

Indicate the performance level for the PL and the PSG separately. Do this by placing an X under the appropriate column for the performance level, along the row marked PL for the Platoon Leader and the row PSG for the Platoon Sergeant.

**Performance vs Standard**

| | | Far Below | Somewhat Below | Meets Standard | Exceeds |
|---|---|---|---|---|---|
| **PLANNING** Quality of plans; Time iness of plans; | PL | | | | |
| Consult with subordinates | PSG | | | | |
| **COMMUNICATION** With subordinates | PL | | | | |
| With superiors With other units | PSG | | | | |
| **SUPERVISION** Specifies tasks clearly to subordinates; Checks | PL | | | | |
| on performance of tasks; Makes sure errors corrected | PSG | | | | |
| **INITIATIVE** Acts without direct orders to accomplish mission intent; Requests that | PL | | | | |
| supervisors reconsider approach based on new information | PSG | | | | |
| **SOLDIER/TEAM DEVELOPMENT** Builds teamwork; Takes care of soldier | PL | | | | |
| needs; Maintains discipline | PSG | | | | |

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Performance vs Standard

| | Far Below | Somewhat Below | Meets Standard | Exceeds |
|---|---|---|---|---|
| **DECISION MAKING** Decisive; Consults, but makes independent decisions; Good problem solving approaches | PL | | | | |
| | PSG | | | | |
| **TEACH/COUNSEL** Provides helpful feedback; Uses rehearsals; Delegates to provide experience | PL | | | | |
| | PSG | | | | |
| **INNOVATION** Seeks/uses original methods; Improvises with available material | PL | | | | |
| | PSG | | | | |
| **BOLDNESS** Shows/accepts risk taking; Stands by convictions, actions | PL | | | | |
| | PSG | | | | |
| **FLEXIBLE** Adjusts to the situation; Deals well with the unexpected | PL | | | | |
| | PSG | | | | |
| **TECHNICAL/TACTICAL** Knows tactics, METT-T, maneuver, equipment, weapons systems | PL | | | | |
| | PSG | | | | |

## OVERALL MISSION PERFORMANCE

In this section, circle the alternative below a question that best describes your response about the Platoon and leaders that you observed in this rotation.

1. For this rotation as a whole, how effective was this Platoon as a unit in accomplishing its missions?

Poor            Only Fair            Good            Excellent

2. For this rotation as a whole, how effective was the Platoon Leader as a leader?

Poor            Only Fair            Good            Excellent

3. For this rotation as a whole, how effective was the Platoon Sergeant as a leader?

Poor            Only Fair            Good            Excellent

4. For this rotation as a whole, how effective was the platoon's Company Commander as a leader?

Poor            Only Fair            Good            Excellent

5. In the Platoon which you observed, how effective were the squad-level leaders as leaders for this rotation as a whole?

Poor            Only Fair            Good            Excellent

6. To what extent did the leaders at company level and above give your Platoon Leader and Platoon Sergeant adequate opportunity to show their leadership abilities in planning, preparation, and execution of missions in this rotation?

| Highly Inadequate | Rather Inadequate | Border-line | Somewhat Adequate | Decidedly Adequate |

## LEADERSHIP PERFORMANCE AT NTC

The 11 leadership competencies are again listed below. Spaces are provided for your responses about the leadership of Platoon Leaders and Platoon Sergeants in general ---that is, based on all your observations as an Observer/Controller in NTC training exercises.

For the leadership of Platoon Leaders, which of the four leadership competencies are most important to unit (Platoon) combat effectiveness?

Indicate your responses by placing an X in the space under Platoon Leader for each of the four leadership competencies that you choose.

After answering for the Platoon Leader, please answer again for the Platoon Sergeant.

| Leadership Competency | Platoon Leader | Platoon Sergeant |
|---|---|---|
| Planning | _____ | _____ |
| Communication | _____ | _____ |
| Supervision | _____ | _____ |
| Initiative | _____ | _____ |
| Soldier/Team Development | _____ | _____ |
| Decision Making | _____ | _____ |
| Teach/Counsel | _____ | _____ |
| Innovation | _____ | _____ |
| Boldness | _____ | _____ |
| Flexible | _____ | _____ |
| Technical/ Tactical | _____ | _____ |

In addition to the 11 competencies listed above, are there other leadership competencies of a Platoon Leader or Platoon Sergeant that are important to Platoon effectiveness in combat? If yes, please describe (below and on the back, if necessary)?

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# APPENDIX B

## STANDARDS/GUIDLINES FOR JUDGING
## PLATOON LEADER AND PLATOON SERGEANT PERFORMANCE

# LEADERSHIP DATA COLLECTION

This packet defines the purpose for and method of data collection during the NTC Rotation.

## PURPOSE OF DATA COLLECTION

To obtain information to aid the Center for Army Leadership in defining Army-Wide indicators of leadership performance effectiveness in combat. Definition of the indicators will be a long-term process. However, once defined, the indicators will be used to structure leader development programs in Army units and schools.

## METHOD OF DATA COLLECTION

OCs will use pocket-sized cards to record observations on leader performance vs standard. At the end of the rotation, OCs will participate in a group session to provide information on the materials used during the rotation.

More specifically, each OC is to complete 3 cards for each mission.

On the front of each card, information is to be recorded so that the completed cards can be accurately organized for data analysis. This identification information is as follows:

| OC Team | _____ | BN/CO/PLATOON | _____ | TF/CO-TEAM | _____ |
| DATE | _____ | BN/BDE MISS. | _____ | PLATOON MISS. | _____ |

Definitions for the identifiers are as follows:

OC Team--OC Team to which the OC is assigned for the rotation.

BN/CO/PLATOON--The parent BN, CO, and PLATOON of the Platoon being observed/controlled by the OC.

TF/CO-TEAM--Unit identifier for the same Platoon but in terms of the task force organization for the rotation.

DATE--The date tne mission started.

BN/BDE MISS.--The overall Task Force or Brigade mission.

PLATOON MISS.--Mission specific to the Platoon.

The next pages describe the other information to be recorded on the three cards for each mission.

Both sides of Card 1 are to be completed for each mission in the rotation.

SIDE 1 (FRONT)

Use Side 1 of Card 1 to record observations of the level of performance of the platoon leader (PL) and platoon sergeant (PSG) on each of five leadership competencies:  Planning, Communication, Supervision, Initiative, and Soldier/Team Development.

For each leadership competency on Card 1, record your observations of the level of performance of a leader in comparision to standard.  ANNEX A contains guidlines on the meanings of standards and the levels of performance for each competency.

Make separate observations and recordings for the PL and PSG for each competency. Record your observations in the appropriate column and row on the card (see below).

For example, suppose your observations indicate that the PL met standards on Planning.  Then place an X under the Meets Standards column and in the PL row for Planning.  If the PSG had exceeded standards for planning, then an X would be placed under that column and in the row for PSG Planning.

OC TEAM_____  BN/CO/PLATOON_____  TF/CO-TEAM_____
DATE _____  BN/BDE MISS. _____  PLATOON MISS._____

| PLT. CARD 1 | | Performance vs Standard | | | |
|---|---|---|---|---|---|
| | | Far Below | Somewhat Below | Meets Standard | Exceeds |
| PLANNING Plan quality, timeliness | PL | | | | |
| | PSG | | | | |
| COMMUNICATION With subordinates, superiors | PL | | | | |
| | PSG | | | | |
| SUPERVISION Specify tasks, check/correct | PL | | | | |
| | PSG | | | | |
| INITIATIVE Exploit opportunities | PL | | | | |
| | PSG | | | | |
| SOLDIER/TEAM DEVELOPMENT Teamwork/care for troops | PL | | | | |
| | PSG | | | | |

SIDE 2 (BACK)

On this side, write comments on conditions that affected your observations about the level of performance of the PL and PSG for the leadership competencies.

By conditions, we mean:

(1) Circumstances that impacted on the opportunity for the leader to show his performance ability in the planning, preparation or execution phases of the mission.

or

(2) Circumstances that affected your ability to get relevant information on leader performance.

As appropriate, provide comments on conditions separately for the PL and PSG.

Conditions Affecting Judgments Of:
PL LEADERSHIP PERFORMANCE

PSG LEADERSHIP PERFORMANCE

## CARD 2:   SIDES 1 AND 2

This card has space for written notes.  The notes are to summarize the reasons for your observations of the level of performance of the PL and PSG for each leadership competency.

By reasons, we mean:

What you observed, in the mission, that led to your judgment of the PL's or the PSG's performance.

### SIDE 1

On Side 1 of Card 2, write your comments for the PL.

```
OC TEAM_____  BN/CO/PLATOON_____   TF/CO-TEAM_____
DATE_____   BN/BDE MISS._____    PLATOON MISS._____
(PLT. CARD 2)    Reasons For Judgment of PL Leadership Performance
PLANNING
```

COMMUNICATION

SUPERVISION

INITIATIVE

SOLDIER/TEAM DEVELOPMENT

### SIDE 2

On Side 2 of Card 2, write your comments for the PSG.

```
        Reasons For Judgment of PSG Leadership Performance
PLANNING
```

COMMUNICATION

SUPERVISION

INITIATIVE

SOLDIER/TEAM DEVELOPMENT

Use Card 3 to record your observations in a mission of the overall performance effectiveness of:

The PL as a Leader

The PSG as a Leader

The CO (of your PL & PSG) as a Leader

The Platoon as a Unit

Also, record your observation of how important platoon level leadership performance was to the performance of the platoon in the mission (separately for the PL and the PSG).

Again, place an X in the box that best describes your overall observations.

Additional guidance for this card will be provided prior to the rotation.

OC TEAM_____ BN/CO/PLATOON_____ TF/CO-TEAM_____
DATE _____ BN/BDE MISS. _____ PLATOON MISS._____

| PLT. CARD 3 Overall Effectiveness of: | Effectiveness Level | | | |
|---|---|---|---|---|
| | Poor | Only Fair | Good | Excellent |
| PL as a leader | | | | |
| PSG as a leader | | | | |
| CO as a leader | | | | |
| Platoon as a unit in accomplishing its mission | | | | |
| Importance to Platoon Mission Accomplishment | Very Unimpt. | Not Impt. | Impt. | Very Impt. |
| Importance of PL leadership | | | | |
| Importance of PSG leadership | | | | |

Note.--The back of CARD 3 is blank. Please use it as additional space to continue written comments that you started on CARD 1 or on Card 3.

## ANNEX B
## GUIDELINES FOR OBSERVATIONS

This Annex contains guidance for making observations during a mission on leader performance with respect to the leadership competencies of Planning, Communication, Supervision, Initiative, and Soldier/Team Development.


## DETERMINING LEVEL OF LEADERSHIP PERFORMANCE


This Annex contains one page of guidance for each of the five leadership competencies. This guidance:

* Identifies major components of the general leadership competencies; for example, "specifying tasks" is a component of supervision.

* States standards of performance for each component, based on current doctrine.

* Gives descriptions for determining level of performance during a mission (from "Far Below" to "Exceeds") in comparison to doctrinal standards.

* Provides examples of performances for each competency


## USING THE GUIDANCE


Major components of each leadership competency are identified on the next pages.

If you obtain information on these components during a single mission, give equal consideration to all components in determining the level of performance on the leadership competency.

If the available information does not cover all components of a leadership competency, base your determinations on this more limited information. However, you may also decide to note any information limitation as a condition on Side 2 of Card 1.

# PLANNING

**COMPONENT A:**     **Plan Quality**

**Standard:**

Plans focus on what is essential to accomplish unit mission.
Plan includes the prioritization and sequencing of tasks as well
as the identification of resource needs and supply sources.

| Far Below | Somewhat Below | Exceeds |
|---|---|---|
| Plans have many important gaps/ deficiencies | Plans have some important gaps/ deficiencies | Plans not only deal with essentials but contingencies/ time for rehearsals |

### Performance Indicators

Leaders explicitly state/identify key tasks, priorities,
sequencing, resources.

Subordinates know key aspects of plans.

Plans include sleep plans, time for rehearsals, ways to deal
with contingencies.

**COMPONENT B:**     **Plan Timeliness**

**Standard:**

Plans are provided in a timely fashion to subordinates.
(The 1/3 - 2/3 rule is a guideline only)
Initial planning is done to produce warning orders.
With time constraints, leaders prioritize planning factors.

| Far Below | Somewhat Below | Exceeds |
|---|---|---|
| Even with enough time for own planning, leaders leave little time to subordinates | Leaders leave some time for subordinates to plan; but not enough | Leaders produce quality plans very quickly. Subordinates have time to develop/ rehearse own plans. |

### Performance Indicators

Warning orders with key plan actions are provided subordinates.

Subordinates have enough time for planning.

Leaders adjust planning approach to time constraints.

## SUPERVISION

**COMPONENT A:    Specifying Tasks and Standards**

**Standard:**

Leaders specify critical tasks/standards for subordinates in a timely fashion through orders, instructions, SOPs, and other means such that subordinates know what they have to do.

| Far Below | Somewhat Below | Exceeds |
|---|---|---|
| Leaders consistently fail to specify important tasks | Leaders fail at times to specify important tasks | Leaders specify tasks so that subs. can deal with on follow-up tasks/ contingencies |

### Performance Indicators

Leaders explicitly state tasks/standards

Unit uses SOPs effectively to specify tasks/standards

Subordinates know tasks/standards.


**COMPONENT B:    Leaders Check and Enforce Standards**

**Standard:**

Leaders consistently check whether tasks have been done to specifications, have deficiencies corrected, follow up on corrections. Leaders combine personal inspections and use of the chain of command.

| Far Below | Somewhat Below | Exceeds |
|---|---|---|
| Important tasks are often not checked/corrected | Leaders check on important tasks only sometimes | Mistakes are identified/corrected before they have an adverse impact |

### Performance Indicators

Leaders checks on tasks and takes actions to enforce standards.

Subordinates make corrections.

Subordinates report that leaders monitor performance, care about doing things right.

# COMMUNICATION

## COMPONENT A: Inform Subordinates

**Standard:**

Communication with subordinates is clear, concise, timely and complete. Leaders convey the intent of any orders or instructions and the priorities.
Subordinates understand the overall unit mission two levels up.
Leaders check to ensure that subordinates understand.

| Far Below | Somewhat Below | Exceeds |
|---|---|---|
| Communications are poorly done and too infrequent | Some communications done well but some key information not passed on | Communications very effective and timely. Lowest level soldier has a high insight into mission |

### Performance Indicators

OPORDERS, Warning Orders are clear, emphasize priorities/intent.

Leaders ask for briefbacks and ensure subordinate understanding.

Subordinates can accurately describe mission intent and key info.

## COMPONENT B: Communicating with Superiors

**Standard:**

Leaders use clear, concise, compete timely communications to keep superiors informed of needed information in the areas of mission planning, preparation, and execution. The leaders ask questions of superiors to ensure their understanding of their superiors' orders and information.

| Far Below | Somewhat Below | Exceeds |
|---|---|---|
| Communications infrequent and not done well | Some communications done effectively but some key information not provided | Excellent at anticipating information needed by superiors |

### Performance Indicators

Superiors provided with important information, updating status.

Leaders ask questions of superiors to ensure understanding.

Leaders communications are clear, concise, complete and timely, given the circumstances.

# INITIATIVE

## COMPONENT A:  Initiate Actions to Accomplish Mission

**Standard:**

Leaders consistently take actions to accomplish mission without waiting for orders to do so:   Exploit battlefield opportunities. Suggest changes in mission plans, preparation or execution to superiors.

| Far Below | Somewhat Below | Exceeds |
|---|---|---|
| Takes almost no action on own to further mission success | Takes some actions on own to accomplish mission success | Takes every opportunity to act to further mission success |

### Performance Indicators

Leaders take actions without direct orders/supervision to solve problems, improve the chances for mission success.

Leaders suggest to superiors changes in mission plans/execution.

Leaders contact superiors about important information that they discover.

Leaders contact superiors and others to point out things that need to be corrected such as shortages of ammunition.

# SOLDIER/TEAM DEVELOPMENT

COMPONENT A:                    Encourage Teamwork

Standard:

Leaders consistently take actions to increase and maintain the
motivation of platoon members to work as a team to meet mission
objectives.

| Far Below | Somewhat Below | Exceeds |
|-----------|----------------|---------|
| Leaders take very few effective actions to improve teamwork | Leaders take some effective actions to improve teamwork but miss some good chances | Consistently take many actions to improve teamwork; some creative approaches used |

## Performance Indicators

Leaders coach on how platoon members can better work together.

Leaders use positive feedback to encourage subordinates.

Leaders share hardships.  Leaders willing to push tired soldiers.


COMPONENT B:  Take Care of Soldiers Physical Needs

Standard:

Troops' needs are met, as conditions allow, in terms of food,
water, sleep, safety, and medical.

| Far Below | Somewhat Below | Exceeds |
|-----------|----------------|---------|
| Troops' needs often not met even when it could be done easily | Troops' needs sometimes met but not as often as could have been | Leaders take care of needs even under difficult circumstances |

## Performance Indicators

Troops get needed food and water;  sleep plans set up/followed.

Leaders communicate and monitor safe practices.

Leaders check on well being of troops.

Leaders make efforts to make sure needed supplies are available
for troops.

**APPENDIX C**

THIRD OBSERVER/CONTROLLER CARD

Third Card Used in First Rotation

OC Team _____ TF/CO/Platoon _____ Date _____ Mission _____

Performance vs Standard

| | Far Below | Somewhat Below | Meets Standard | Exceeds |
|---|---|---|---|---|
| PL CONSULTED WITH THE PSG<br>In planning, key decisions | | | | |
| PL INFORMED PSG ABOUT CHANGES<br>Affecting tactics/supply/mission | | | | |
| PSG SUPPORTED THE PL<br>Advice, coordination with subs. | | | | |
| PSG TOOK CARE OF LOGISTICS/SUPPLY<br>Exploit opportunities | | | | |
| PL/PSG HAD CLEARLY DEFINED ROLES<br>Effective delegation/sharing | | | | |

<u>Front (upper half) and Back (lower half) of Third Card</u>
<u>Used in Second and Third Rotations</u>

OC Team _____    BN/CO/PLATOON _____    TF/CO-TEAM

DATE _____    BN/BDE MISS. _____    PLATOON MISS. _____

(PLT. CARD 2)    Reasons for Judgment of PL Leadership Performance

PLANNING

COMMUNICATION

SUPERVISION

INITIATIVE

SOLDIER/TEAM DEVELOPMENT


Reasons for Judgment of PSG Leadership Performance

PLANNING

COMMUNICATION

SUPERVISION

INITIATIVE

SOLDIER/TEAM DEVELOPMENT

# APPENDIX D

## OUTLINE OF SUBJECT-MATTER-EXPERT (SME) OBSERVATION GUIDE

**SME OBSERVATION GUIDE**
**LEADERSHIP FOCUSED ROTATION**

**NTC Rotation 88-5**

SME_____

SME_____

OC Team_____

TF/CO/Platoon_____

Mission_____


**PLANNING-PREPARATION**

Date/Time Platoon received warning order

_____

Date/Time Platoon received operations order from Company

_____

Issuance of company operations order was attended by:

___ SME      ___ PL

___ OC       ___ PSG

Company operations order was such that it:

Described the BN CDR's intent?
___ Yes

___ No

Described the Platoon's role in fulfilling the BN and CO
CDRs' intentions?
___ Yes

___ No

The Platoon received (select one)
___ Goals/Objectives to be obtained?
___ Procedures/Operations to be executed?

Issuance of the platoon operations order was attended by:

___ SME      ___ PL

___ OC       ___ PSG

D-3

Was Platoon Leader (PL) or the Platoon Sergeant (PSG) killed or wounded during this mission?  If so, record for each instance the date/time that the PL or PSG was killed/wounded and, if this occurs, the subsequent date/time that the PL or PSG was brought back into play.

PL killed/wounded at _____     brought back at _____
PL killed/wounded at _____     brought back at _____
PL killed/wounded at _____     brought back at _____

Note:  Write in additional times if necessary.

PSG killed/wounded at _____     brought back at _____
PSG killed/wounded at _____     brought back at _____
PSG killed/wounded at _____     brought back at _____

Note:  Write in additional times if necessary.

---

Record the dates and times when the Platoon Leader (PL) and Platoon Sergeant (PSG) are known to have been asleep on a periodic basis.  Also record the dates/times when they were obviously awake.

PL asleep at _____     awake at _____
PL asleep at _____     awake at _____
PL asleep at _____     awake at _____
PL asleep at _____     awake at _____

PSG asleep at _____     awake at _____
PSG asleep at _____     awake at _____
PSG asleep at _____     awake at _____

For each of the 11 competencies listed below you will fill out 2 pages of information with respect to the PL performance.  You will also fill out the same kind of information with respet to PSG performance.

The first page of information in each case is subtitled "Performance Judgement/Key Incident" and the second page is subtitled "Background to Performance Judgment"

Therefore, this section of the observation guide is comprised of 44 pages (2 types of information pages, times 11 competencies times 2 types of leaders)

The 11 competencies are:

Planning          Supervision

Initiative        Soldier/Team Development Decision Making

Teach/Counsel     Motivate Others

Flexible          Technical/Tactical

Communication     Trust in Subordinates

NOTE.  Only the two pages of the SME guide for Planning by the PL are presented in this appendix.  the pages for all competencies for each of the PL and PSG were identical to those for PL Planning, except of course for the competency and the leader rated.

## PLANNING BY THE PLATOON LEADER (PL)

How well did the PL perform on this competency during this
mission?  (Circle one of the below)

### Performance vs Standard

Far Below          Somewhat          Meets          Exceeds
                   Below             Standards

If you were able to observe and judge the PL's performance on
this competency, indicate the following:

An incident during the mission that was critical to or that best
exemplifies your judgment of the PL's level of performance on
this competency:  who was involved in the incident, when the
incident occurred, important circumstances, and what the PL and
other soldiers involved did during the incident.

# PLANNING BY THE PLATOON LEADER (PL)

What you did to obtain information about the PL's performance on this competency.

Practical considerations for an observer and characteristics of/conditions during the exercise important for obtaining good information about the PL's performance on this competency.

Your confidence in your judgment of the level of the PL's performance on this competency.

Reasons for your judgment of the PL's level of performance on this competency.

**If you not able to judge the PL's level of performance on this competency, circle each of the following below that applies and explain.**

      1.  My location during the mission did not allow me to obtain critical information.
      Explanation--

      2.  There were equipment problems.
      Explanation--

      3.  Events critical to (or performances exemplifying) the competency by the PL did not occur during the mission.
      Explanation---

How critical was the leadership effectiveness of the Platoon
Leader for the platoon's level of success in this mission?  On
which of the leadership competencies--planning, communication,
supervision, initiative, soldier/team development, decision
making, teaching/counseling, technical/tactical, motivating
others, and flexibility--was the Platoon Leader's leadership most
critical?

How critical was the leadership effectiveness of the Platoon
Sergeant for the platoon's level of success in this mission?  On
which of the leadership competencies--planning, communication,
supervision, initiative, soldier/team development, decision
making, teaching/counseling, technical/tactical, motivating
others, and flexibility--was the Platoon Sergeant's leadership
most critical?

## PL - PSG Relationship

Next are some dimensions of the relationship between the Platoon Leader (PL) and Platoon Sergeant (PSG). For each, circle the alternative that best summarizes your judgment of the dimension during this mission.

### Performance vs Standard

The Platoon Leader consulted with the Platoon Sergeant in planning and key decisions.

Far Below       Somewhat        Meets           Exceeds
                Below           Standard


The Platoon Leader kept the Platoon Sergeant informed about changes affecting tactics and supplies.

Far Below       Somewhat        Meets           Exceeds
                Below           Standard


The Platoon Sergeant supported the Platoon Leader through sound advice and coordinating with subordinates.

Far Below       Somewhat        Meets           Exceeds
                Below           Standard


The Platoon Sergeant took care of logistics and supplies needed for mission accomplishment and unit effectiveness.

Far Below       Somewhat        Meets           Exceeds
                Below           Standard


The Platoon Leader and Platoon Sergeant had clearly defined roles.

Far Below       Somewhat        Meets           Exceeds
                Below           Standard

During this mission, did the Platoon Leader or Platoon Sergeant either as individuals or as a pair receive input from an OC or another leader on aspects of their leadership performance?

Yes _____          No _____

If yes, describe the input given and, as possible, describe the input in terms of the leadership competencies--planning, communication, supervision, initiative, soldier/team development, decision making, teaching/counseling, technical/tactical, motivating others and flexibility?

Was there any important aspect of the Platoon Leader's or Platoon Sergeant's leadership during this mission that has not been covered by your earlier comments?  If so, please describe here.

Was there evidence that a work/rest or sleep plan was in place and/or being carried out?  That is:

|  | YES | NO |
|---|---|---|
| Was it discussed? | ____ | ____ |
| Did the Platoon Leader and Platoon Sergeant alternate sleeping? | ____ | ____ |
| Did Squad Leaders (TCs) get to sleep? | ____ | ____ |
| Did soldiers have rest periods? | ____ | ____ |
| Were radio and guard duties covered by rested soldiers? | ____ | ____ |

Estimate the average amount of sleep that the following platoon members got during the mission (from warning order to after-action review):

| Unit Member | Average Hours of Sleep |
|---|---|
| Platoon Leader | _____ |
| Platoon Sergeant | _____ |
| Squad Leaders/Tank Commanders | _____ |
| Team/Crew Members | _____ |

Did everything come to a halt in the Platoon when the Platoon Leader slept?

Yes ____     No ____

Was there ever a period when all leaders in the Platoon (Platoon Leader, Platoon Sergeant, and Squad Leaders or TCs) were asleep?

Yes ____     No ____

APPENDIX E

SUPPORTING DATA TABLES

Table E-1
Importance of Leadership to Platoon Mission Accomplishment

| Importance of | Mean Rating | Standard Deviation | Number of Platoons |
|---|---|---|---|
| PL Leadership | 2.9 | .7 | 59 |
| PSG Leadership | 2.8 | .7 | 55 |

Note. Ratings from second and third rotations. Results consistent with ratings for the importance of leadership as a whole from the first NTC rotation.

Table E-2
Components of Platoon Leader (PL)-Platoon Sergeant Sergeant (PST)
Relationship: Level of Performance and Relationship with
Platoon/Unit Effectiveness

| Relationship Component | Level of Performance Mean | SD | Correlation with Platoon Effectiveness MA-EFF | SUM-EFF |
|---|---|---|---|---|
| PL consulted with PSG | 2.4 (24) | .60 | .63 (21) | .50 (22) |
| PL informed PSG about changes | 2.7 (24) | .44 | .47 (21) | .44 (22) |
| PSG supported PL | 2.7 (23) | .57 | .37 (20) | .44 (22) |
| PSG took care of logistics | 2.7 (24) | .49 | .37 (21) | .50 (22) |
| PL & PSG had clear roles | 2.6 (24) | .49 | .56 (21) | .54 (22) |

Note. Entries are MA levels of performance (means and standard
deviations) and correlations of the MA judgments with MA-EFF and
with SUM-EFF. Sample sizes are in parentheses. Correlations of
.44 or greater are statistically significant, $p < .05$.